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HANDY BOOK

OF

VETERINARY HOMŒOPATHY.

BY

JAMES MOORE, M.R.C.V.S.

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NEW YORK:

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P R E F A C E .

IN this work I have embodied the results of my latest experience of the homœopathic treatment of the principal diseases which visit our domesticated animals.

I have attempted to make the work the best one yet published on the subject. How far I have succeeded in my object others can best judge.

In illustration of the remarks on the treatment, and as an additional guide in carrying out the directions, I have quoted several cases from the "British Journal of Homœopathy," for 1858, from my "Practical Reply to Sir B. Brodie's Letter," and from my "Veterinary Homœopathy Illustrated."

11, UPPER BERKELEY STREET,
PORTMAN SQUARE.

30288

ERRATA.

Page 34, eighteenth line, for "16," read 12.

Page 67, eighth line, for "something," read *sometimes*.

Page 192, fourteenth line, for "contractible," read *contractile*.

Page 203, last line, for "this disease," read *these diseases*.

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HANDY BOOK
OF
VETERINARY HOMŒOPATHY.

THE UNIVERSITY BOOK STORE
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PALO ALTO, CALIF.

INTRODUCTORY REMARKS.

IN using this work as a guide to the homœopathic treatment of the diseases of our chief domesticated animals, the reader is particularly requested to “mark, learn, and inwardly digest” the following observations.

The rules respecting—

How to select the remedy ;

What dose to give ;

How often to give the dose ;

must be *specially* studied, and referred to after having settled what the disease is, and what remedy is indicated.

I.—EXAMINATION OF THE PATIENT.

This is the first thing to do when an animal is ill. The symptoms which it presents must be minutely inquired into, for two purposes : firstly, to determine the seat and nature of the disease ; and, secondly, to obtain indications for

the selection of the right remedy. Attention to the following points will be of service:—

1.—*The Organs of Circulation.*

(1.) The heart should be examined by the hand, ear, or stethoscope being placed on the left side, behind the elbow-joint, to ascertain the force and rhythm of its action, and the character of its sounds, whether natural, or unnatural.

(2.) Important information is gained by learning the state of the pulse,—whether regular or irregular, soft or hard, frequent or slow, &c.

The dog's pulse is felt by placing the fingers on the artery at the inside of the fore leg, just above the knee.

The horse's pulse is best felt where an artery passes over the edge of the lower jaw, about three inches from the angle of that bone; it may also be felt at the inner side of the leg near the elbow-joint.

In cows the pulse may be felt, as in the horse, at the jaw, or fore leg. A convenient place, in some cases of illness, is over the fore fetlock, exactly in front in a line with the cleft of the foot.

In smaller animals, the pulse may be felt on the inside of the arm, or thigh.

The beats per minute of the pulse are, on an average, in health and adult life, in the horse 36

—in the ass and mule 46—in the ox 45 to 50—in sheep, goat, and pig 70—in dog 90.

It must not be forgotten, however, that the pulse varies somewhat from the healthy standard in all animals, under the influence of various circumstances, including age, size, temperament, breed, mode of feeding, domestication, &c.

2.—*The Respiratory System.*

(1.) Ascertain if the nose is hot or cold; dry or moist, covered or not with hardened mucus; if there is sneezing, or offensive smell, or indications of polypoid growths or foreign bodies in the nostrils; if there is discharge—its character, whether watery, gluey, mattery, or bloody; if ulcers can be seen on the nasal membrane.

(2.) The character of the breathing,—frequent, difficult, painful, laboured, &c.

In a healthy animal, in complete rest, the frequency of breathing, is *nearly* in the proportion of one act of breathing to four beats of the pulse. In the horse, there are, taking an average, 10 acts of respiration in the minute—15 in the ox—15 in sheep—20 in the dog—in smaller animals, higher.

(3.) If the expectoration, when there is any, is scanty or abundant; mucus or pus, or both; if expelled easily, or with the aid of vomiting.

(4.) If the cough is rare or frequent, painful

hoarse, croupy, barking, dry or moist, recent or chronic.

(5.) If both sides of the chest expand equally during breathing, or if one side expands more than the other; if pressure causes pain, flinching, and grunting.

(6.) If the sound is clear or dull when the lungs are percussed; if dull noting the position.

(7.) If, on listening to the chest, the sounds attendant on respiration are natural or morbid; if the latter, ascertaining their character and marking their site.

3.—*The Digestive System.*

(1.) If the teeth are all, or only in part cut; rotten, broken, worn down, loose, black, incrustated with tartar, irregular, &c.

(2.) If the tongue is bitten, swollen, inflamed, cut, or paralyzed on one side; if furred; moist or dry; or altered in colour; or covered with vesicles, or ulcers.

(3.) If the mouth is hot and dry, or cool and moist; if the breath is offensive, or not; if the mucous membrane is inflamed on the gums, in company with the peculiar odour of mercurial poisoning and salivation.

(4.) If swallowing is difficult or painful, or attended with choking; examining the throat

internally for bones, polypus, &c., and externally for enlarged glands, &c., bronchocele, &c.

(5.) If the stomach is disordered, as indicated by the appetite, thirst, vomiting, &c.; the vomit being specially observed as to appearance and smell; and, if necessary, analyzed in cases of suspected poisoning.

(6.) The size of the belly, whether hard, or soft, or painful; dull or clear when percussed, or fluctuating when tapped; containing tumours or foreign bodies; if there is diarrhoea, dysentery, constipation, piles; the character of the expelled excretions, as to colour, consistence, quantity; the existence of pregnancy.

(7.) The size, position, and feel of the liver; if there are indications of enlargement, or of jaundice.

4.—*Genito-Urinary System.*

(1.) The functions of the uterus; discharges from, or tumours connected with it.

(2.) The state of the vagina; if the seat of polypus, cancer, ulceration, displacement, discharge, or injury.

(3.) If the milk-glands or teats are tender, swollen, hard, cancerous, inflamed, ulcerated, or pocked, &c.

(4.) If the penis or prepuce is inflamed or ulcerated; or the seat of fungus growths, stones, &c.

(5.) Note the way in which urine is voided, and whether there is, or is not, a discharge of blood.

5. *The Integumentary System.*

(1.) The skin, whether blotched, or mangy, or otherwise diseased; if the disease is partial or universal; the seat of morbid growth, dropsy, &c.; if hot or cold.

(2.) The state of the feet, nails, and pads.

6. *The Nervous System.*

(1.) The shape and size of the head; whether the scalp is injured, or the skull fractured.

(2.) Insensibility, or profound coma.

(3.) If the special senses of sight, hearing, &c., are diminished or lost; noting at the same time the condition and colour of the eye.

(4.) If there are fits, convulsions, trembling, rigidity, palsy, or any peculiarity of movement when walking, such as avoiding, or rolling over obstacles in the way, or turning round and round.

It would be easy to enlarge the objective symptoms of disease, but the above may prove sufficient as finger-posts in aid of practical observation and accurate diagnosis.

II.—HOW TO SELECT THE REMEDIES.

The symptoms having been ascertained, and for the sake of reference, instruction, or publication, noted down from day to day, the next step is to select the proper remedy for the disease. Under the "treatment" of each malady, a few remedies are given, with certain symptoms attached to each. That medicine, or those medicines, are to be given, whose symptoms correspond the most exactly with those of the disease. For instance, if the disease should be influenza, *Aconite* is to be given when the symptoms recorded in connection with it, are present in the patient; and *Belladonna* when the symptoms recorded after it, are present. Should the symptoms of both these medicines be present in the same case, then both medicines should be given, not mixed, but separately and in alternation. These instructions are applicable to every other disease. I may here remark that *all* the appropriate remedies are not mentioned, but only those that are generally useful in ordinary cases.

III.—THE REMEDIES.

The medicines prescribed in this work, and used in my practice, are *internal* and *external*.

The internal are in two forms :—

(1.) *Tinctures*, or alcoholic solutions of the remedy, varying in the dilution, usually the first decimal.

(2.) *Triturations*, in which the crude drug is minutely subdivided, by being rubbed up with a non-medicinal substance in certain fixed proportions. These are used less than tinctures.

I sometimes give *Pilules*, which are non-medicinal vehicles, saturated with a certain dilution of any given medicine. They are specially suitable for small dogs, when it is necessary to give medicine either from the dog refusing, or being unable, to take it.

For the lists of the internal remedies and external applications, refer to the appendix.

IV.—WHAT DOSE TO GIVE.

The following directions on this point apply to all the internal medicines mentioned in this work, and should be followed out, except when the dose is specially stated under the "treatment."

The *average* doses for ordinary attacks of the diseases mentioned in this treatise are stated, in the body of this work, as "10 for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs." The fol-

lowing table will give at a glance the average dose for each of the animals named :—

Horse.....	10 drops	Sheep	5 drops
Pony. }		Lamb	2 drops
Ass... } 5 to 7 drops	Goat	5 drops
Mule. }		Dog (large).....	5 drops
Cow (adult).....	10 drops	——(small)...	1 to 2 „
——(2 years old)..	7 drops	Pig.....	2 to 5 „
Calf.....	5 drops	Cat.....	$\frac{1}{2}$ to 1 „

In order to do away with the trouble and inconvenience of having to drop *each* dose when it is required, the best plan is to mix enough for one or two days. For instance, in the case of the horse and cow, drop 60 drops of the tincture into a *perfectly clean bottle*, add 6 wine-glassfuls of pure cold water, and cork up. Of this mixture give a wine-glassful, by means of a clean horn,* as frequently as may be required. In the case of smaller animals, mix the dose, as stated above for each, with a teaspoonful of water; thus, for a medium-sized dog, add 12 drops of tincture to 6 teaspoonfuls of water, and give a teaspoonful when required. Each wine-glassful, and each teaspoonful of the two mixtures thus made, will, of course, contain 10 drops, and 2 drops respectively. Two medicines must never be mixed together. If two medicines are being given to the same

* Small horns, specially made, can be got from most homœopathic chemists.

horse or cow, two horns should be used—one for each medicine.

In the sleepy stage of milk fever, instead of mixing with a wine-glassful of water, I use only a teaspoonful—because in such cases swallowing is difficult or impossible, and a small quantity of fluid is more readily absorbed by the mouth than a large quantity.

The triturations—the doses of which are stated in the body of the work—are given to horses in a handful of bran mash; or, when it can be managed, in all animals, dry on the tongue.

V.—HOW OFTEN TO GIVE THE DOSE.

In acute cases, such as inflammation of the lungs, or in such as are attended with pain, or are evidently attended with great danger unless speedily checked, the medicine, or medicines, should be given frequently,—every quarter of an hour, half-hour, hour, or every two hours, according to the violence of the symptoms. When the disease is within the remedial power of medicine, and when the remedy is adapted to the disease, improvement will set in, in a majority of cases, after a very few doses. Then it follows that the medicine, or medicines, must be given less frequently than before. When two medicines

are required to meet all the symptoms, each dose of them is to be given alternately; for instance, if *Aconite* and *Bryonia* are both indicated, and if the severity of the disease necessitates their administration every hour, *A.* is to be given, say at the even hours, 2, 4, 6, and *B.* at the odd hours, 3, 5, 7, etc. And so with the others.

In old-standing cases, or in chronic diseases, the medicine may be given two, three, or four times a-day, according to circumstances.

SHORT NOTES ON NURSING.

When an animal is ill, it should, if possible, be placed by itself in a clean, well-ventilated, and moderately-warmed box, or stall. This is especially necessary in the case of catching diseases, as well as when noises are injurious, as in lock-jaw, or when the horse rolls about violently, as in colic. The excretions and soiled bedding should be removed as often as may be necessary. For horses, plenty of straw should be laid on the floor, particularly in colic, &c. Fresh hay, or clean wood shavings, form the best bed for sick dogs; but pet dogs have usually a more elegant couch. -

When the skin is cold, and the hair rough and staring, sufficient clothing should be put on to insure a comfortable degree of warmth. The legs of the horse may also be swathed in flannel bandages, which should be removed occasionally, and, after hand-rubbing the legs, put on again.

In diet, it is generally the safest and best course to follow the cravings of appetite. In acute cases, the appetite is impaired, or absent, and the animal will eat little or nothing, even when food is within his reach. As improvement sets in, in many cases of diseases, the appetite is

more or less keen, and the patient is apt to gorge himself, and do himself serious injury. The rule is to give small quantities frequently, rather than a large quantity at long intervals. Hay is good at all times given in bits, provided it be good and clean. Cold water, or cold hay tea, in small, frequent sips, should not be forgotten. Bran mashes are good during most illnesses, and boiled linseed in sore throat and colds. Carrots and boiled oats, or barley, are always relished during recovery from any illness, as well as green food, when it can be got.

Occasionally, it is necessary, when the animal is unable to eat, to give food by drench or injection.

Rough usage is to be avoided, both for humanity's sake and for medical reasons. In tetanus, and some other diseases, an angry word, or rough handling, causes a great increase of suffering.

CHAPTER I.

DISEASES, ETC., OF THE TEETH.

1.—THE TEETH AS TESTS OF AGE.

THE process of dentition from early to advanced life, especially with respect to the order in which the different sets of teeth make their appearance through the gum, and the striking changes in their shape and marks, has been satisfactorily elucidated by several able investigators. The information derived from an examination of the mouth furnishes reliable grounds, as a rule, for giving a trustworthy opinion on the animals' age; and, in the case of the horse, an experienced man can speak with absolute exactness, except when the horse is aged.

IN HORSES.

In the foal the two middle incisors, or front teeth of both jaws, are cut at birth, or they appear shortly afterwards. These are presently followed by three molars, or grinders, on each side of both jaws, and at the sixth week, by two

other incisors in each jaw. At about the ninth month, the corner incisors are cut. When a year old the horse has, therefore, 12 molars and 12 incisors. From the first to the second year the teeth already cut are in full use and wear, and two more molars on each side of both jaws appear in succession. At two years there are, therefore, 12 incisors and 20 molars, all temporary teeth. Between the second and third year these teeth begin to fall out and give way to the permanent set, which appear in the same order as the first set. The two middle incisors in the upper and lower jaw are the first to be replaced by stronger and larger permanent incisors marked on the cutting surface by a deep dark hollow; from three to four, the next incisors above and below are replaced; and from four to five, the corner incisors—making in all 16 permanent incisors. By four and a-half, the temporary molars have gradually given way to corresponding permanent molars, and the sixth and last molar, a permanent tooth, appears, as well as the four tusks, or tushes, of the horse. At this period the full number of teeth are cut, viz., 44 in the horse, 40 in the mare, and at five they are all in full wear, and undergoing, especially the incisors, those changes which furnish the best evidence of the animal's age. At six, the lower middle incisors are without mark; at seven, the

same change is found in the other incisors; and at eight, all the black marks are worn out, even in the corner incisors. At a later period, the incisors become triangular on their cutting surface, and stand out straighter from the jaws. The marks are retained longer on the upper incisors, but they are less reliable than those on the lower as indications of age. The tushes, too, at first small and sharp, gradually, as age advances, become longer, blunter, and yellower. In exceptional cases, one may meet with an old horse having a young mouth, as far as the shape and marks of the incisors are concerned, but the changes above described generally hold good. It is important not to mistake the temporary for the permanent teeth, otherwise a two-year-old may pass for a five-year-old, with a "green" buyer. The permanent teeth are larger and darker, and have a furrow down the centre on the outer surface.

IN OXEN.

Oxen have eight incisors in the lower jaw, and in the upper no teeth, but instead, a "pad" of elastic tissue; and 24 molars. In early life, the age is ascertained by the times when the temporary are succeeded by the permanent teeth, and later, by changes in the teeth themselves, which become narrower, blunter, and stumpy. In addition,

count three for the space between the top ring on the ox's horn and the top, and one for each of the other rings. Professor Simonds gives the following table of the successive changes in the teeth of this animal:—

TABLE OF EARLY AVERAGE— IMPROVED BREEDS.				TABLE OF LATE AVERAGE— IMPROVED BREEDS.			
Years. Months		No. of Teeth.		Years. Months.		No. of Teeth.	
1	.. 9	..	2 permanent incisors	2	.. 3	..	2 permanent incisors
2	.. 3	..	4 "	2	.. 9	..	4 "
2	.. 8	..	6 "	3	.. 3	..	6 "
3	.. 3	..	8 "	3	.. 0	..	8 "

IN SHEEP.

In the sheep, also, the age is determined partly by the shedding of the temporary for the permanent teeth, and partly by the wearing appearance of the teeth themselves. On an average, at one year the central pair of temporary incisors are replaced by the permanent—at one and a-half, the second pair—at two and a-half, the third—and at three, the fourth pair.

IN DOGS.

In this animal the whole of the temporary teeth appear at about two weeks after birth, sooner or later. The most central incisors of both jaws drop out and are replaced by perma-

nent teeth at from the second to the fourth month, and the change is fully completed with the others by the eighth month, when 20 are found in the upper and 22 in the lower jaw. The cutting edge of the incisors have three lobes; that in the middle is large and forms the top of the tooth, those on the sides smaller, and the three together present a trefoil shape. This shape begins to disappear by wearing at the fifteenth month, until, in process of time, it is wholly obliterated, and the edge is levelled down. In addition, the tushes and other teeth become blunter and yellower, and then the dog's age cannot be told with certainty.

IN PIGS.

At the first month, there are four incisors, and three temporary molars on each side of both upper and lower jaw. At three months, two more incisors appear in each jaw, and this completes the temporary set. In some, at about the sixth month, false tushes appear in both jaws in front of the molars. At the sixth month, the fourth molar is through. At nine months, the permanent corner incisors and permanent tushes are cut, and the fifth molar on each side. At twelve months, the middle incisors are replaced, as well as the temporary molars. At, or about the eighteenth month, the process is completed in

the pig by the appearance of the side incisors, and sixth and last molar.

2.—IRREGULARITIES OF THE TEETH.

One of the most common irregularities occurs during growth, when one incisor projects from the jaw instead of being side by side with the others. The term "buck" tooth is applied to this condition. The remedy is removal. In some cases a temporary tooth has to be drawn in order to make room for the proper placing of a permanent one. A supernumerary tooth—"wolf's" tooth—sometimes appears in front of the molar set in either jaw; when it interferes with chewing, it should be extracted. An outgrowth of bony substance from a tooth has been met with, and should be chipped off if it cause any inconvenience. The molars are often irregular. One, instead of coming through the ridge of the gum, may protrude through the roof of the mouth, and when long injure the tongue and prevent eating and chewing. From irregular wearing of the surface of the molars, the edges of these teeth become sharp and jagged, causing wounds of the inside of the cheek or tongue, and interfering with chewing. These sharp edges

should be rasped down. Occasionally, the excessive growth of a molar leads to injury of the upper jaw, followed by inflammation and ulceration, with offensive discharge from the nose, swelling of the face, and impaired chewing. Such a tooth should be rasped down, or drawn.

In rasping, or drawing the teeth of animals, instruments made for the purpose must be used, and a veterinary surgeon called in to handle them.

3.—PAINFUL AND DIFFICULT TEETHING.

IN HORSES, OXEN, &c.

In some horses the process of teething gives rise generally to much disturbance, especially in the case of the tushes. There is a certain amount of feverishness, attended with refusal to eat, difficulty and pain in chewing, disorder of the bowels, and even colic, passage of uncrushed oats, irritating cough, loss of flesh and condition, &c. The gum is found to be hot, painful, and swollen.

IN DOGS.

Dogs, in consequence of their more excitable temperament, suffer more than other animals from this difficulty, and especially those that are

delicate, high-bred, or pampered. Considerable disturbance not unfrequently arises when the temporary teeth become loose preparatory to their being replaced by the permanent set. Unless these loose teeth readily fall out of themselves, or are drawn, they set up much pain and irritation, and are apt to become refixed to the gum close to the permanent teeth. This happens especially with the tushes. Thus, not only are the teeth irregularly placed, but the gum is irritated, and accumulations of food decompose and give off a most offensive smell; the animal meanwhile suffering much, and refusing food.

TREATMENT.

Belladonna is the best remedy when the animal is feverish and suffers much pain, and when the gums are tender to the touch.

Calcurea is of use when the teeth are slow in appearing, as the result of constitutional weakness.

Doses.—10 drops of these medicines, night and morning, for the horse and cow; 5 drops for sheep and pig; 2 to 5 for dog.

There are cases where it is necessary at once to remove the urgent symptoms by freeing the tooth, which is done by cutting through the gum cross-wise over the tooth. Also, pull out loose, or superfluous teeth.

4.—CARIES—DECAYED TEETH.

IN HORSES.

The incisors never, the molars frequently are rotten. This is indicated by a peculiarly offensive smell issuing from the mouth, by slavering, by swelling, redness and pain of the gum around the diseased tooth, by a black spot or cavity in the tooth, and by accumulation of foul food in its vicinity. There are fits of toothache, especially when it is the third molar that is affected. When the three last molars are decayed, and the gum inflames, the matter resulting therefrom makes its way into the maxillary sinuses, and thence flows through the nose, giving rise to much local disturbance, general irritative fever, most offensive stench, and presenting a condition which has often been mistaken for glanders. In some cases of decayed molars, in addition to other symptoms, one eye is inflamed and watery. Sometimes the abscess bursts on the surface, and then we have to deal with that troublesome state known as *Fistula of the face*. A diseased lower molar may set up inflammation of the lower jaw, with enlargement of the bone, and mattery dis-

charge—a condition which I have seen more than once, and cured by the extraction of the offending tooth, followed by general and local treatment. The teeth should be carefully examined in all cases of pain and swelling of the bones of the face and jaws, particularly if accompanied by nasal discharge and imperfect chewing.

IN DOGS.

Dogs are very liable to decayed teeth from crunching bones, carrying hard substances in the mouth, eating rich and bad foods, and especially by being over-dosed with mercury—a drug which has a most poisonous effect on a dog's mouth and bowels. A dog with decayed teeth smells fearfully; he shows from his manner that he has toothache; he eats little or nothing for days together; when he does attempt to chew he drops the food out again; and he gradually gets thin and weak. When the tooth is broken down to a stump, irritation of the gum follows, and at last "canker" of the mouth is established. The sound teeth are also freely covered with offensive tartar.

IN OTHER ANIMALS.

The symptoms are those given above, and the same general treatment should be carried out.

TREATMENT.

It is essential at once to extract diseased teeth, and if the contiguous bone is diseased to give *Silicea*, in 10 drop doses three times a day. If matter has discharged on the skin keep the part thoroughly clean by washing with warm water, and treat locally for fistula as directed in the remarks on that subject.

5.—TOOTHACHE.

IN HORSES.

When a horse shows from his conduct that he is suffering pain, and when he refuses his food, or cannot chew it properly, hangs his head, and is worse in these respects after drinking cold water, he may have a rotten tooth, or be suffering from some other unnatural condition of the mouth.

IN OXEN, DOGS, &c.

The symptoms are much the same. In all animals the only treatment is to pull out the diseased teeth.

GENERAL SYMPTOMS OF DISEASED TEETH.

Animals suffering from diseased or irregular teeth present some, or all of the following symptoms:—The food is not chewed thoroughly, but after having been partly ground down is thrown out. Horses “quid” their hay and bolt their corn, which is seen in the dung uncrushed. The result is that partly from constant pain and partly from loss of nourishment, the animal gets dull, thin, and hide-bound, and then is apt to suffer from colic, or some other disease incited by its low condition. Some of the consequences of diseased teeth to the parts adjacent in setting up irritation, inflammation, and nasal discharge have been already referred to. In caries, there is a most disgusting smell issuing from the mouth, attended with increased flow of saliva, indications of acute pain, and swelling and redness of the gum around the diseased tooth. Whenever these symptoms are met with, a careful examination of the mouth should not be neglected.

CHAPTER II.

DISEASES OF THE MOUTH.

1.—APHTHA—THRUSH.

IN HORSES.

THRUSH is occasionally met with in the horse, although less frequently than in other animals. It consists in an eruption of small vesicles on the mucous membrane lining the mouth. When the fluid in these vesicles is discharged, small ulcers are observed, and this ulcerated condition may be somewhat widely spread from the small ulcers running together. The lining of the mouth peels off, leaving below a tender surface, which prevents the animal from eating as usual. On examining the mouth, these appearances are observed on the tongue, lips, inside of the cheeks, and gums. In the horse, thrush is sometimes accompanied by strangles. It arises in all cases either from the local irritant action of improper food, or acrid plants, or as the result of constitutional disorder.

IN OXEN.

In oxen, thrush is often observed. The symptoms are the same as those found in the horse, with the addition of a more profuse discharge of stringy slaver from the mouth. Thrush is *not* "foot and mouth disease:" it is not contagious, does not spread like an epidemic (epizootic in the lower animals), and is not associated with disease of the teats and feet; by these differences simple thrush may be known from the more serious murrain. It should also be distinguished from the rinderpest, in which disease there is a peculiar thrush-like condition of the mouth and lips. Oxen do not chew the cud as usual.

IN SHEEP.

Sheep also are often attacked with thrush, the most frequent cause being, in them as in oxen, eating acrid irritating plants. It is found associated with foot-rot, in some cases. For the symptoms read the above description.

TREATMENT.

In all cases begin with *Kali Chloricum*.

If, after giving this remedy for a few days, no improvement is manifest substitute *Mercurius*.

DOSES.—10 drops for horse and cow, thrice a day;
5 drops for pig and sheep; 2 to 5 for dog.

2.—INFLAMMATION OF THE MOUTH AND TONGUE.

IN HORSES.

It has been known to follow the internal administration of turpentine in too-large doses, and it occasionally arises from other more obscure causes. The whole of the mouth is more or less affected with redness, pain, and swelling, and throughout the progress of the disease there is much febrile excitement. In course of time, the lining membrane of the mouth peels off, and the parts are left raw and sore, and extensive ulceration and even gangrene may result. There is copious discharge of mucus. In some cases the tongue is more severely inflamed than the other parts of the mouth—then it is swollen and hangs out, and in bad cases, matter forms in it, or it is left hard, stiff, and enlarged. When the tongue is much swollen, swallowing is difficult, and the breathing so impeded as to threaten choking. One of the most frequent causes of inflamed tongue in the horse is injuries resulting from violence in giving balls, or from the animal biting his tongue.

IN OXEN.

The causes are the same as in the horse, and it may also follow the administration of hartshorn given to cattle suffering from hove. The symp-

toms and treatment of this disease in the ox, and other animals, are those given above and below.

TREATMENT.

Aconite should be given at first when the animal is feverish, the mouth dry and red, and the tongue swollen and painful.

Arnica is indicated when the inflammation has resulted from injuries. *Arnica* lotion* may also be applied locally.

Mercurius may be given with good results when, as a result of acute, unchecked inflammation the tongue is hard and much swollen; also when there is great dribbling, difficulty of swallowing, and redness and rawness of the mouth generally.

Hepar Sulphuris may be required when matter is forming in the tongue.

Arsenicum is the best remedy when gangrene threatens.

DOSES.—10 drops for horse and cow every 2 or 3 hours; 5 for sheep and pig; 2 to 5 for dog.

In addition, if suffocation be imminent on account of the great swelling of the tongue, and if matter have formed, incisions should be made into the tongue. Plenty of cold water should be allowed, together with gruel, linseed tea, &c., and if necessary, thin fluid foods should be given by drench.

* See list of local applications.

3.—PROTRUSION OF THE TONGUE.

IN HORSES, OXEN, &c.

This is a symptom of paralysis, weakness of the muscles of the tongue, and of injuries. Paralysis of the lips on one side sometimes co-exists, resulting from local injury to the nerves distributed to the parts. The lower lip then hangs down, and food is picked up with difficulty; there is also more or less slavering. Of course, the tongue is very liable to be severely injured when it falls between the front teeth, and repeated injuries of this kind may result in troublesome wounds, or ulcers.

TREATMENT.

When arising from injuries give *Arnica*.

When a symptom of paralysis, the most likely medicine to do good is *Nux Vomica*.

The last medicine failing to improve after a month's course, try *Belladonna*.

DOSES.—10 drops night and morning for horse and cow; 5 for sheep and pigs.

Generally, the tongue must be shortened, otherwise it is continually falling between the teeth and getting injured.

When the tongue is injured, refer to page 51.

IN DOGS.

Some dogs, particularly high-bred spaniels, are subject to palsy of one side of the tongue, resulting either from general debility, or from some other ill-understood cause. The disease is known by the tongue lolling out of the mouth, with an inclination towards one side—the healthy side; the tongue is still able to lap up food, but the dog cannot thoroughly clean his nose with it; the nose, therefore, gets covered with mucus; the tongue, from exposure to the air and want of the mucous secretion of the mouth, becomes dry and hard. The disease depends on structural disease, or functional disorder of the brain or nerves, leading to loss of power over the muscles which move one side of the tongue. In some breeds, the tongue hangs out of the mouth, perhaps to one side, as if the tongue is rather too long, or the snout too short. This is to be regarded as a congenital peculiarity of the breed, and not as a disease. Palsy of the tongue as compared with this condition is rare.

TREATMENT.

Nux Vomica is the most likely medicine to be of service in such a case as this; but to obtain its good effects it should be administered regularly for a considerable period.

DOSE.—2 to 5 drops three times a day.

4.—INJURIES ABOUT THE MOUTH, TONGUE, &c.

IN HORSES.

The tongue may be injured by the forcible and awkward administration of balls and drinks, and the fringe of membrane which connects the under surface of the tongue with the floor of the mouth may be torn. The lower jaw and angle of the lips are sometimes hurt, and even a portion of the tongue severely crushed, by bits, or rough usage in riding or driving. Rough, irregular, too-long teeth may tear the tongue, or bruise the cheeks and palate. Needles, thorns, sharp bones, may stick in the tongue, or mouth. In cart horses, particularly, by the absurd use of bearing-reins, the angle of the mouth is bruised, and an abscess forms which may break in the inside or outside.

The tongue is also liable to injury when it protrudes from the mouth, as has been already mentioned above.

IN DOGS.

Dogs frequently injure the tongue by getting it between the teeth during a fit, and also by biting sharp substances.

TREATMENT.

In all cases, apply *Arnica lotion** three or four times a day, and *Calendula lotion** for open wounds, cuts, &c. Remove foreign bodies. When ulcers form, give *Hepar Sulph.*

DOSES.—10 drops for horse and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs.

5.—THE LAMPAS IN THE HORSE.

By this name is called a swelling, more or less painful, of the bars of the roof of the mouth behind the front teeth, generally on a level with the teeth's surface, sometimes projecting lower. It is not a specific disease, but a symptom connected with the shedding of the teeth in young horses, or with disordered stomach. It interferes with feeding and chewing, causes the horse to be off his feed, and is usually attended with some degree of feverishness.

TREATMENT.

Let it alone, or treat as for "Difficult Teething," (page 39), or "Indigestion," (which see) according to the symptoms present. If any one recommends "burning," ask to have the same measure tried on the roof of his mouth.

* See list of local applications.

6.—SALIVATION.

IN HORSES, OXEN, SHEEP, &c.

Excessive dribbling of slaver from the mouth has already been alluded to as a prominent symptom in inflammatory diseases of the mouth, &c. It has been observed from eating grass containing mustard, and from the use of mercury, internally, or externally.

TREATMENT.

Remove the cause, frequently inject cold water into the mouth, and when it does not arise from mercury, give *Mercurius*; when it does, *Hepar Sulph.*

Doses.—10 drops for horse and ox; 5 for sheep and pigs—one dose three times a day.

IN DOGS.

Salivation is one of the most marked indications of MERCURIAL POISONING, and is the earliest symptom of the constitution being under the influence of that powerful metal. Hundreds of dogs have been killed by the different preparations of mercury, either applied to the skin for the cure of eruptions, or given internally in various visceral diseases. The black, blue, red,

and white ointments of the chemist, who very often presumes to prescribe for diseases which he knows nothing about, are all so many preparations of the different mercurial compounds. Calomel is often given, even by professional men, in excessive doses, from 5 to 10 grains.

The effects produced by mercury vary in severity with the quantity administered; and the effects are precisely the same whether the drug is swallowed or absorbed into the system by the skin. The gums are tender, swollen, spongy, and red; the teeth are discoloured and loose; the breath is peculiarly foetid,—this is a characteristic sign; saliva dribbles freely from the mouth; the glands at the jaw are enlarged, hard and painful; there is no desire to eat, but great thirst; the mucous membrane of the mouth may be more or less ulcerated, especially under the influence of large doses. When the lining of the coat of the stomach and bowels is inflamed, there are frequent retchings, the rejected mucus being tinged with blood, and the stools are fluid and bloody. The hair falls off and is seldom re-produced; irritative fever, debility, tremors, convulsions, and paralysis appear in quick succession and destroy life. Even in the most favourable cases recovery is slow, and long after both the teeth and breath give evidence of the havoc which the mercury has committed, and of the difficulty encountered

in ridding the system of the mercurial poison. The hair, too, seldom, if ever, grows as long as formerly.

TREATMENT.

One grain of *Potass Iod.* dissolved in a table-spoonful of water, should be given night and morning, so long as improvement goes on; or 5 drops of *Hep. Sulph.* At the same time, the dog should have nourishing food, and be kept warm, dry, and free from draughts of cold air. Loose teeth should, of course, be drawn, for as they seldom or never become firm in the jaw again, they are apt to act as foreign bodies, and set up local irritation. When the mouth is ulcerated, *Calendula lotion** will prove grateful and beneficial.

7.—RANULA.

Ranula consists in obstruction and distension of the duct of one of the glands which secretes saliva, under the tongue, on one or on both sides. When large it is very troublesome.

TREATMENT.

Open with the lancet. Give 10 drops of *Mercurius* three times a day. If necessary, dress the wound with *Calendula lotion*.*

* See list of local applications.

8.—BONE IN DOG'S MOUTH.

Sometimes a dog gets a bone fixed firmly between the molar teeth of the upper and lower jaw of one side. It is then impossible for him to shut his mouth, and he gets anxious, full at the eye, dribbles saliva, and appears as if choking. The owner is likely to think that the jaw has been broken, or put out of joint. Sometime since, a favourite dog presenting these symptoms was hurriedly brought to a medical friend of mine, who, on examining the mouth, found a piece of bone firmly wedged in between the molars. This was speedily removed, to the great delight of the animal.

9.—OSTEO-SARCOMA OF THE LOWER JAW IN OXEN.

This is the scarcely accurate name of a disease affecting the lower jaw, sometimes the ribs also, of young cattle, and of steers oftener than bulls. The favourite seat is that part of the lower jaw where the second and third molars are attached. Occasionally, but rarely, the upper jaw is affected. It begins in the form of a small, painful swelling,

which grows either rapidly or slowly, and is attended with gradually increasing pain. The bone becomes seriously involved, the teeth become loose or rot, and fall out, whilst the pain and impeded chewing induce wasting. It is very common in some parts of Italy, especially in low-bred cattle.

TREATMENT.

The only likely means of effecting a thorough cure is to remove the swelling as soon as it appears. If operation should fail, call in the butcher.

10.—GLOSS-ANTHRAX—BLAIN.

This is one of the family of the "anthrax" diseases, so common and so fatal amongst cattle, sheep, and pigs. In its nature it is a putrid fever, in which the blood is poisoned with a poison derived from other animals, or self-bred from various causes; and I mention it in this place, instead of classing it with the other maladies of the same character, because it is signalized by the breaking out of a foul and malignant carbuncle in the tongue, or mouth.

IN OXEN AND SHEEP.

Formerly this disease was much more common in Britain than it is now, but it is still not unfrequently met with in some parts of Ireland and Scotland. On the continent it is well known as the most rife of all anthrax diseases, and as occasionally assuming an epizootic form, and then spreading with great severity and virulence. The course of the disease is very rapid. There are no signs of warning. It begins suddenly with white pustules on the tongue, lips, roof of the mouth, inside of the cheeks, &c., which gradually increase in size. There is generally one large pustule on the tongue, where the local mischief is most centered. The pustules then become red and angry-looking, and finally, as gangrene advances, purple and black, and foul with sloughs, or, in bad cases, the tongue falls out in a lump. All this may take place in a few hours, and death in from 18 to 30 from the onset. In addition to these local symptoms, the constitutional disturbance is great, the animal languid and drowsy, and the powers of life profoundly prostrated. Sheep are less liable to this disease than oxen.

IN PIGS.

This animal is peculiarly subject to several forms of putrid fever, attended with outbreaks of carbuncular swellings, including a malady

identical with cattle and sheep gloss-anthrax. The symptoms observed in the pig are;—trembling and uneasiness, anxious frightened look, loss of appetite, hot mouth and thirst, with dribbling of mucus from the mouth, and febrile excitement. The appearance of a vesicular, or pustular eruption in the mouth is somewhat similar to that found in cattle, as well as the tendency to ulceration, sloughing, and gangrene of the tongue and mouth, the great prostration, and the rapid death. Bloody, offensive diarrhoea frequently comes on towards the last.

TREATMENT.

No time should be lost in treating this disease, and even when treatment is begun early it may prove fatal from its rapidity and virulence. The diseased animal should be separated from healthy ones, and the same man should not attend upon both. He should be careful not to get inoculated with the matter from the mouth. Nourishing food should be given throughout; by drench, if necessary.

Tartarus Emeticus is the best medicine to begin with, when the mouth is covered with white pustules.

Mercurius Binioid is the best when the disease is more advanced—the tongue and mouth covered with angry ulcers, from the pustules bursting—

when there is reddish and offensive discharge—and swelling of the neck and throat, with difficulty of swallowing.

Arsenicum, when gangrene threatens, and the animal is drowsy and prostrated.

Doses.—1 grain of the above medicines every one or two hours ; as the symptoms yield every four hours. For sheep and pigs half a grain.

*Sulphurous Acid lotion** should be frequently applied both to annul the bad smell, to destroy the contagious property of the discharge, and to avert the tendency to sloughing and gangrene. If there be one large carbuncle, it should be freely opened with the lancet and then dressed with the lotion—especially if it be true, as some maintain, that the disease is local at first, and only infects the system at large by the virus being absorbed.

IN DOGS.

A disease known as the “blain” is sometimes observed in the dog, but whether or not it be identical with the malady under consideration is doubtful. The symptoms are somewhat analogous. The tongue is enlarged, and subsequently covered on its sides and under-surface with large vesicles, of a red or livid colour, which may end in irregular, and even gangrenous ulcers. The

* See list of local applications.

attack often begins without any apparent cause or previous illness. The disease is most common in spring and summer, and sometimes prevails as an epizootic. In addition to the above symptoms the breath is highly offensive, the saliva profuse, purulent, and perhaps bloody, and the appetite impaired.

TREATMENT.

Mercurius and *Arsenicum*. The former is to be given first, in from 2 to 5 drop doses, six times daily, when the tongue is inflamed, enlarged, and ulcerated; and the latter in the same way, when the ulcers assume a livid tint, and when symptoms of low fever and debility supervene.

For the last symptoms *Kali chloricum* is also a remedy of great value.

It may be advisable in some cases to open the vesicles freely, and then to apply *Calendula lotion** to heal up the open ulcers which remain.

The weak condition of the dog, and its inability to swallow, in consequence of the swollen and painful state of the tongue, may necessitate the administration of beef-tea, or wine, with a spoon. Fluid food should be within its reach, so that it may sip up some when inclined.

* See list of local applications.

1000
STANTON
300 PASEO DRIVE
PALO ALTO, CALIF.

11.—CANKER IN THE DOG'S MOUTH.

This affection of the gums and teeth arises from the irritation of the stumps of rotten or worn-down teeth, and eventually leads to extensive inflammation of the adjacent parts. The gum is at first red, swollen, tender, and prone to bleed; a somewhat painful swelling forms on the jaw; the enlargement suppurates and discharges matter, either pure or mixed with blood. At this stage the smell is intolerably offensive. Subsequently, fungoid granulations, which easily bleed, sprout up and profuse hæmorrhage ensues. The dog, suffering great pain, and unable from the state of the mouth to masticate solid food, and barely able to lap up fluid nutriment, gradually becomes thinner and weaker; the local disease increases in severity, and, finally, the animal dies worn out from exhaustion, or succumbs under an attack of acute intercurrent disease.

TREATMENT.

The treatment should comprise the extraction of stumps and loose teeth, and, in some cases, of even the healthy teeth in the diseased jaw; the removal of necrosed bone; the excision of the tumour, provided the constitution be not already implicated; and the administration of nourishing food. The best internal remedies are, *Kali*

chloricum and *Arsenicum*—the former in 10 drop doses of the first decimal dilution three times a day for two or three weeks; and the latter, subsequently, in from 2 to 5 drop doses, night and morning.

12.—THE MOUTH AND FOOT DISEASE.

The other names of this disease are—epizootic aphtha—epizootic eczema, the murrain, the epidemic, &c.

Outbreaks of this disease in different countries of the Continent are recorded by various writers during the past two centuries as having occurred in horses, oxen, sheep, pigs, goats, wild animals, and even in man. It first appeared in Britain in or about the year 1840, and has since prevailed more or less severely. Some maintain that it was imported here with diseased cattle from infected districts, and that it never spreads except by direct contagion; whilst others ascribe its appearance and fluctuating prevalence to a peculiar condition of the atmosphere, and pertinently ask where the *first* case came from. The contagionist and the non-contagionist are still engaged in contesting the correctness of each other's opinion. A good deal can be said on both sides, fitting in

with facts; and the question may be regarded as finally settled when the former can satisfactorily explain the origin of disease in the first instance, and the fleeting visits and final disappearance of the most virulent human and brute pests.

IN OXEN.

A period, called the period of incubation or breeding, varying from one to four days intervenes between exposure to the cause and the first appearance of illness. The symptoms of this, the *first stage* are as follow :—dulness, loss of appetite, shivering, diminution of urine, hot skin, trembling of the muscles of the legs, the snout dry, the head supported on the manger. The mouth is dry and hot, red and painful to the touch; the saliva next becomes stringy and abundant; the teeth are ground; and the breath stinks. If the eruption is going to appear around the hooves and in the interdigital spaces, the animal stamps with impatience and is restless, and brings its legs under its belly so as to relieve them from the weight of its body; it also rests much and is loth to rise. In cows, when the eruption is about to appear on the teats or udder, these parts are found to be red, painful and swollen, and milking is painful and not quietly submitted to.

In the *second stage* the fever subsides and the eruption appears on the mucous membrane of

the mouth—lips, gums, tongue, cheeks, and the muzzle, wings of the nose, as well as on the coronets, and, in cows, on the udder. The vesicles vary in size from that of a millet seed to a lentil, are raised in the middle, and are either arranged singly, or run together into a patch; they contain at first a clear fluid, which afterwards becomes thicker and opaque. When these vesicles burst, the fluid is discharged along with the increased flow of saliva, and the surface underneath is seen to be vividly red, and sometimes ulcerated. The animal is constantly licking its nose with its tongue and smacking its lips, and, from the tender state of the mouth, cares little to seize and chew its food. When the eruption appears on the feet, the coronet is swollen and painful, the animal is very lame, the vesicles soon burst, and frequently the entire hoof drops off. The vesicles on the teats are larger and raised, but not pointed in the centre; they are usually surrounded by a red ring, soon burst, and dry into scabs, which peel off gradually. If the cow be milked, the crusts on the teats are rubbed off by the milker's hand, troublesome ulcers are apt to follow, the milk is not all removed in consequence of the cow's restlessness, it is mixed with blood, and afterwards with matter, and at last inflammation comes on, which may end in death, or the loss of a portion of the udder.

In the *third stage* the disease either abates, or increases. In the former case, the mucous surface and the skin previously occupied by the eruption heals and resumes its natural condition and appearance, the appetite returns, and all the other functions of the body are restored to their healthy state. When the disease gets worse ulceration takes place, the hoofs drop off, irritative fever continues, the breathing is quick, an offensive discoloured discharge dribbles from the mouth, sometimes collections of matter appear on different parts of the body, and death, often preceded by purging, follows from exhaustion.

Such are the chief symptoms of a disease, which, sometimes very mild, sometimes very violent, always inflicts severe loss on stock owners from its causing loss of condition and of milk rather than from its fatality.

It has been satisfactorily proved that this disease does not prevent an attack of the lung disease, nor the latter an attack of the former.

There are numerous facts on record both for and against its contagiousness, and all that can now be said is that this point is undecided. Many strong contagionists have been compelled to change their opinion.

Some writers state that not only has aphtha extensively prevailed in man at the same time as in the lower animals, but they have declared

that the milk of diseased cows was the sole channel of communicating the disease. Reynal suggests that those who have had an eruption in the mouth from drinking the milk of an aphthous cow, caught, not genuine aphtha, but an eruptive disease having analagous characters to cow-pox; and this is all the more probable seeing that cow aphtha is something complicated with what the Germans call false cow-pox (*falsche-poken*). On this, and all other like questions connected with the alleged transmission of some diseases of brutes to man, there is much obscurity and no little romance. It appears to be positively proved that the flesh of an aphthous cow does not disease man.

IN SHEEP AND PIGS.

The symptoms and course of the disease are substantially the same as in the cow, except that the first stage is shorter, and that usually the whole duration is about eight days, instead of varying from eight to sixteen, as in oxen. The hoofs are very frequently cast off, and condition not quickly recovered.

TREATMENT.

In the first stage, when the animal is feverish—a condition made known by shivering, loss of appetite, quick pulse, and other symptoms already mentioned, give *Aconite*.

When the eruption breaks out in the mouth and on the udder, and both parts present the appearance described above, give *Mercurius*.

Another valuable remedy for the eruptive stage, especially when unhealthy ulceration threatens to come on, and when there are purging, shedding of the hoofs, and great weakness, is *Arsenicum*.

Phosphoric Acid may prove of service in the last stage.

Kali Bichromicum is more especially suitable when the nose is principally involved, and collections of matter appear in different parts of the body.

Tartar Emetic I have used in some cases with good effects when *Mercurius* has been used without much benefit.

When, in addition to the mouth affection, the udder is severely inflamed—red, tender, and swollen, give *Belladonna* in turn with *Mercurius*.

DOSES.—10 drops of the above medicines for cattle; 5 for sheep and pigs; each dose every three hours.

LOCAL APPLICATIONS.—The feet should be kept thoroughly clean by being bathed three times a day with warm water, and after each cleansing, apply the following lotion around the tops of the hoofs and in the interdigital spaces:—*Kali Chloricum*, 2 drams; *Glycerine*, 8 fluid ounces; water, 8 ounces—all to be well rubbed together.

The milk should be regularly drawn off, either with the hand, or by means of teat tubes, and the sores dressed with a lotion composed of *Tincture of Calendula*.*

FOOD.—During the disease, and afterwards when the mouth is tender, the diet should consist of gruel and mash.

13.—MUMPS.

This disease consists of inflammation of the parotid gland.

IN HORSES.

In addition to the parotid, the gland on the inner side of the lower jaw-bone may likewise be inflamed. This especially happens in strangles. In ordinary cases, after exposure to cold, or from some other cause, the animal becomes feverish, off his feed, thirsty, &c. ; then symptoms of sore throat come on—cough, difficulty and evident pain in swallowing, and some obstruction to the breathing. The gland, usually on one side, sometimes on both, swells and becomes hard and painful to the touch. The swelling does not go on to the formation of matter, but remains hard for some time.

* See list of local applications.

IN OXEN.

Mumps is perhaps seen more frequently in oxen than in horses, especially in winter, during stall feeding.

TREATMENT.

Foment with hot water for half-an-hour three times a day, and after each fomentation apply a hot bran poultice.

Two medicines are generally sufficient in this disease—*Belladonna* and *Mercurius*, six times a day, four hours between each dose.

Dose.—10 drops in a wine-glass-full of water.

When the swelling is so large as to press upon the throat and upper part of the windpipe, and so render breathing difficult, it may be necessary to avert the danger of suffocation, by opening the windpipe.

14.—JOINT OF LOWER JAW OPENED.

IN HORSES & OXEN.

A blow may open the joint between the lower jaw and the temporal bone of the skull. The part is painful and swollen, and a glairy discharge escapes, consisting of joint oil. If care be not

taken, the joint inflames, matter runs out, and the bone becomes diseased. Stiffness of the joint may remain, preventing mastication, and thus leading on to starvation.

TREATMENT.

Keep the jaws fixed by a head-collar furnished with a strap going round the face and lower jaw above the openings of the nose; feed on fluids until the wound is firmly healed up; constantly dust on *powdered lime* whenever the fluid exudes; and give 10 drops of *Silicea* three times a day.

CHAPTER III.

DISEASES OF THE THROAT.

I.—SORE THROAT—INFLAMED THROAT.

IN HORSES.

SORE throat is the name commonly applied to an inflammatory condition of the back of the mouth, which is more or less affected throughout its entire extent. It is generally associated with, and is a prominent symptom of inflammation of the larynx, although it may exist as an independent disorder. It very often attacks young horses out of condition when brought out of the farmer's hands and put into hot, ill-ventilated stables, and when they are sent to work and placed on unusually good food. This change in their stabling, work and feeding, predisposes them to be acted upon by exposure to the weather, and

sore throat is induced, or some more serious disease of the breathing organs.

In simple sore throat there is some febrile excitement, with loss of appetite, thirst, &c., followed by hard, dry cough, difficulty of swallowing, quick breathing, and swelling of the throat externally, as well as tenderness when it is handled. The glands under the jaw and below the ears are hot, tender, and swollen. Subsequently, the cough is looser, a discharge flows from the nose, and the mouth contains a frothy fluid.

In the majority of cases these symptoms gradually subside until health is regained, or symptoms of laryngitis, or of bronchitis come on.

Sometimes the inflammation extends to the guttural pouches, and then, if matter should form, as is occasionally the case, there may be great obstruction to the breathing.

IN OXEN AND SHEEP.

Sore throat is most common in these animals when they graze on damp lands, during cold springs and autumns. In some seasons sore throat is exceedingly prevalent amongst cattle. The symptoms are much the same as in the horse. We find the same feverishness, difficulty in swallowing, pain and swelling of the throat, and, in addition, there is no chewing of the cud.

IN DOGS.

Besides arising from cold, sore throat in the dog frequently results from the local action of an irritant substance swallowed. On examining the throat which can be done more readily than in larger animals, the parts are seen to be red and swollen. The general symptoms are the same as in the horse.

TREATMENT.

At the beginning of the attack when the animal is feverish, the pulse and breathing quickened, the membrane of the eye and nose red and injected, the throat tender, and swallowing painful, *Aconite* will suffice, if given early, to arrest the further course of the disease in a large number of cases.

Belladonna is best for a later stage, when the inflammation is more firmly established, and is indicated by swelling and tenderness of the glands and throat externally, great difficulty and pain in swallowing—so much so as to cause fluids to return by the nose, and by discharge of stringy saliva of the mouth. The existence of a dry, irritating cough is an additional indication for its use.

If the last medicine should make no decided impression on the disease, *Mercurius* should be substituted, or the two medicines may be given

in turn, in the same doses, every two or three hours according to the urgency of the symptoms. this medicine is indicated by somewhat the same symptoms as *Belladonna*.

Doses.—10 drops for horse and oxen ; 5 for sheep and pig ; 2 to 5 for dog. Each dose to be given every two, three, or four hours.

If there be much external swelling and tenderness, foment three times a-day with hot water, and afterwards apply a good-sized hot bran poultice to the throat. Give cold water and gruels of linseed or oat-meal, and have the stable well ventilated.

The two following cases are good illustrations of this disease and its treatment :—

CASE I.

October 26th, 1856.—Symptoms.—Pulse 84, and small ; respiration 48, and blowing ; nasal membrane, vascular ; almost constant efforts to swallow, each effort being attended with a clucking sound ; frequent hard ringing cough ; mouth full of tough saliva, which hangs in strings from the palate when the jaws are separated ; submaxillary glands swollen and tender ; legs and ears cold ; urine scanty and high coloured ; appetite bad ; tongue foul ; fæces lumpy and glazed with mucus.

To have 10 drops of first dilution of *Belladonna*, and 10 drops of *Mercurius* every three hours, alternately.

27th.—Pulse 72 ; respiration 40 ; glands larger ; difficulty in swallowing fluids, part of which returns by the nostrils. Continue medicines.

28th.—Pulse 64 ; respiration 40 ; glands larger. *Hepar sulphuris*, 10 drops three times a-day.

29th.—Slight discharge of a dirty white colour from nostrils ; glands soft and fluctuating ; lanced them, but no matter came out. Continue medicines.

31st.—Pulse 60 ; respiration 28 ; copious discharge from the nose ; some matter from lanced gland ; can swallow better ; appetite improved. Continue medicines.

November 4th.—Discharge from nose almost ceased ; improving generally ; lanced other gland, and let out a large quantity of thin, pale yellow matter. Same medicine twice a-day.

8th.—Cured.

CASE II.

October 28th, 1858.—*Symptoms*.—Pulse 80 and full ; respiration 48 ; difficulty of swallowing ; refuses food on account of the pain attending swallowing ; sub-maxillary glands considerably enlarged and tender ; mouth full of tough saliva ; very violent cough ; loud crowing at every inspiration ; there is evidently a sense of suffocation, as the horse every now and then stamps the ground with his fore-feet, and tosses his head about ; anxious expression, &c. To have *Ammon. caust.* every three hours.

29th.—Pulse 64 ; respiration 36 ; less wheezing ; rough sound in trachea ; cough still frequent and inspiration crowing ; fluid returns in part by the nose ; mouth full of slimy, tenacious mucus. To have *Belladonna* every three hours.

November 1st.—Yesterday *Hepar sulph.* was given ; copious discharge from both nostrils of a thin matter,

mixed with small specks of lymph substance; the sounds in the throat give the idea of shreds of some substance hanging down from the roof of the throat, and being moved to and fro by the ingress and egress of air. Continue *Hepar sulph.*, 10 drops every three hours.

3rd.—Pulse 56; respiration 22; cough and crowing less; appetite better; can swallow better, and fluids do not return by nose. Continue medicine.

10th.—Since last report the horse has been going on well, and is now convalescent.

2.—PUTRID, OR MALIGNANT SORE THROAT.

IN HORSES AND OXEN.

This disease is not very frequent in this country, but has proved rapidly fatal in both classes of animals in some localities. It differs from simple sore throat in the suddenness of its attack and the rapidity of its course, as well as in the greater gravity of the general symptoms. At first, high fever comes on, which is speedily followed by swelling and pain in the salivary glands. The throat, inside and out, swells to such an extent as seriously to interfere with swallowing and breathing—the animal then refuses all food, and

the breathing becomes noisy and choking. The breath is most offensive, and gets more so as the disease advances. The animal has an anxious and distressed look, the difficulty of breathing increases, indications of prostration advance, and death soon puts an end to his sufferings.

TREATMENT.

Give the medicines advised in the preceding article on "Sore Throat," every hour or two, according to the severity of the attack.

When symptoms of prostration come on, attended with offensive breath, give *Arsenicum*.

Dose.—10 drops every hour.

In the majority of cases, there is such urgent difficulty of breathing and such imminent danger of suffocation, that the windpipe requires to be opened.

3.—THROAT DISEASES IN THE PIG.

The pig is subject to two distinct diseases of the throat; one consisting of ordinary inflammation of the mucous membrane lining the throat, palate, and larynx; the other, bearing a close analogy to the diphtheria of man, in so far as there is formed a membranous exudation on the diseased surface.

The first form begins with loss of appetite, dullness, disinclination to move, &c., followed by feverishness, difficult breathing, gasping, cough, bluish colour of the mouth, swelling of the tongue, obstructed and difficult swallowing, and choking. A hard, red, painful swelling appears on the neck, sometimes extending down the course of the windpipe. There is great prostration, and a tendency to gangrene and sloughing.

In the second form, the general symptoms are somewhat similar, and depend upon the local mischief interfering with swallowing and breathing, whilst the constitution at large suffers from the blood being vitiated.

TREATMENT.

Refer to the previous articles on throat diseases in other animals.

Dose.—5 drops of the medicines indicated, every one or two hours, according to the violence of the symptoms.

The styes should be well cleaned out, and kept clean; the diseased separated from the healthy, and gruels drenched in.

CHAPTER IV.

DISEASES OF THE GULLET.

1.—POLYPUS.

SOMETIMES a polypus is found to hang from the back part of the nose over the opening of the windpipe, giving rise to hackling cough, obstructed breathing, and frequent efforts to swallow. When such a tumour drops into the windpipe the animal is choked.

Such growths have been observed in both horses and cattle, and often their existence is unsuspected. Whenever the above symptoms are present, the throat should be carefully examined.

TREATMENT.

Introduce the hand into the back of the mouth, and twist off the polypus.

2.—OBSTRUCTION—CHOKING.

IN HORSES.

The passage of food from the mouth to the stomach may be obstructed by various causes. Horses are sometimes choked by food, such as chaff, bran, carrots, turnips, and such like, accumulating or sticking fast in some part of the swallow, or the canal lower down; by the food not being properly chewed and softened by admixture with saliva; and by diseases, such as inflammation, stricture, dilated pouches, in the passage itself. Balls have been known to stick in the throat, or in the lower part of the food-tube, either from being too large, or improperly administered, or from existing stricture.

When the obstruction is in the throat, the animal is in an anxious distressed state, coughs, slavers, breathes quick, seems to be choking, breaks out in sweats, and frequently retches without being relieved. Water administered, or imbibed voluntarily, returns through the nose. Wherever these symptoms are met with, the hand should be put into the mouth, and the throat explored; if any foreign body be there, it will of course be felt, and should be instantly removed.

When the obstruction is in the neck portion of the food-tube, in addition to the foregoing symptoms, a swelling will be seen in the left side of the neck; and when lower down still, in that part of the tube which lies out of sight in the chest, we find violent retching after swallowing fluids, besides most of the above symptoms, except that the choking is less urgent.

IN OXEN AND SHEEP.

Here the symptoms of choking are even more urgent than in horses, much more dangerous, and much more likely to end in death. This arises in great measure from the fact that obstruction, from whatever cause, and wherever situated, puts an immediate stop to the process of cudging, and therefore of digestion, so that the food in the stomachs undergoes fermentation, gases are generated, and symptoms of "hove" come on. To the general symptoms of choking already mentioned as occurring in the horse, there are added, in the case of cattle, severe cough and retching, strong muscular contraction of the neck and belly, and violent expulsion of urine and dung.

IN DOGS.

Choking in the dog arises generally from fish and other bones getting fastened in the throat, or down in the swallow; or from starved or

greedy dogs bolting too large a mass of food. The symptoms are not so severe, as vomiting is much more easily performed in dogs than in horses and ruminants.

TREATMENT.

As soon as the nature of the case is made out, and there should be no difficulty because the symptoms speak for themselves, no time should be lost in overcoming the obstruction. In the first place, if it be due to some foreign body in the back of the mouth, or in the throat, the best plan is to open the horse's mouth, pull the tongue well out, and introduce the hand, and so remove the mass or obstructing object. At the same time, the assistant may render efficient service by compressing the throat externally and trying to loosen the obstacle. In the second place, when it lies in the food-tube beyond the reach of the hand, the swollen part at the side should be rubbed up and down with the flat hand, and such grasping pressure made with the fingers and hands as will be suggested by the intention to loosen the obstacle from where it is fixed, or to break down the mass into smaller pieces. Along with this handling, the animal should drink, or have drenched into it, some tepid water, thin gruel, or oil, in the effort to gulph which, the offending obstacle may be carried down, or is

attempts at retching or vomiting, be brought up by the mouth. When this fails, and even at the first if the obstacle be large and completely immovable, the probang should be introduced at once, the use of which requires some tact, practice, and knowledge of anatomy. Still foiled, there is no other resource left save opening the tube, and removing the cause of obstruction. The wound must then be stitched up, and no solid food given for some time.

Usually, weakness of digestion remains, for which *Nux Vomica*, and the other remedies prescribed under "Indigestion," "Hove," may be required.

3.—DILATATION AND STRICTURE.

This condition of the gullet is sometimes met with in horses. The tube is either dilated near to the stomach, and then we find frequent attempts at retching and vomiting when food accumulates at the part; or it is dilated in the neck-part of the tube, and the swelling occasioned by the lodgement or passage of food is apparent to the eye.

When the dilatation is considerable, and the stoppage of food sets up symptoms of choking,

refer to the remarks just made on this accident. No medicine avails in this condition.

In STRICTURE, the canal is more or less diminished in its diameter. Above the point of constriction, the food lodges and in course of time causes dilatation; hence, the two conditions often co-exist in the same animal. Injuries to, and operations on the gullet are apt to be followed by stricture. Fibrous, cancerous, melanotic, and other morbid deposits are at the bottom of most strictures of the gullet.

Very little can be done in the way of treatment, except to give soft foods. Sometimes an operation may be resorted to with temporary benefit.

CHAPTER V.

DISEASES OF THE STOMACH.

1.—VOMITING.

VOMITING is generally met with as a symptom, rather than as a substantive disease, not only of the stomach but of other organs also. The same may be said of retching, which is the unsuccessful attempt to vomit—to expel the stomach's contents.

IN HORSES.

Horses rarely vomit, but vomiting is sometimes observed during attacks of colic, ulceration of the mucous membrane of the stomach, distension of the stomach with contraction of the bowel immediately beyond; and more frequently, as a constant symptom, when the food-tube in front of the stomach is contracted or dilated as to give rise to accumulation of food, as described at page 81 on choking. Vomiting also occurs when the

stomach is burst, an event which sometimes happens in stomach staggers.

IN OTHER ANIMALS.

Animals that chew the cud (ruminants) are able to vomit, but rarely do so. Vomiting and retching are very common in dogs suffering from diseases of the stomach and bowels, and other diseases. When they gorge themselves, or swallow indigestible substances they instinctively run to the "dog-grass." Emetics are often given to them as part of the treatment of many of their diseases; they do infinitely more harm than good, and often kill, either directly, or by setting up diarrhoea, &c.

TREATMENT.

Vomiting will cease on the cure of the disease of which it is a symptom. See following remarks on "Hove," "Indigestion," &c.

2.—HOVE—HOVEN.

This is the most general name for a very common disorder of cattle depending on distension of the paunch with gas, given off from the decomposition and fermentation of food.

IN OXEN AND SHEEP.*

It arises from turning winter-fed cattle into a rich clover or grass field, especially after rain or damp; from feeding stall-fed cattle on pease meal, beans, &c.; and from giving turnips, potatoes, or roots generally. The same boven condition occurs as a symptom of other diseases, including obstructed gullet, &c.

The chief symptom comes on suddenly during, or soon after eating. A swelling, which gradually increases, rises in the belly towards the left flank, on striking which with the hand a drum-like sound is heard. The animal stops chewing the cud, appears dull, breathes quickly, and rifts up wind. As the swelling increases, so do the cow's sufferings; the breathing becomes laboured and difficult and moaning, the back is arched, the nostrils expanded, the tongue thrust out, the eye-balls anxious and protruded, and saliva dribbles from the mouth. Death is preceded by staggering, falling down, and a greenish discharge from the mouth and nose; and is the result of suffocation. In some cases, the progress of these symptoms is remarkably speedy.

TREATMENT.

As soon as distension is observed, stop feeding instantly. Suddenly dash cold water over the

* So-called Hove in the horse is referred to under "Colic."

belly—this helps to expel the gas, and to re-excite cudding.

The best medicine, according to my experience, is *Ammonium Causticum*, administered as quickly as possible.

Dose.—10 drops of the strong solution in three wine-glassfuls of water every ten, fifteen, or thirty minutes according to the urgency of the symptoms and the effect produced. For sheep, 5 drops.

The next most serviceable medicines are *Belladonna*, or *Colchicum*, one of which should be given if the first should do no good after a few doses have been administered.

Dose.—The same as for *Ammonium*.

In addition to these medicines, mechanical measures must be resorted to from the first, especially if the symptoms appear and advance rapidly so as to threaten speedy suffocation; these are either to pass a hollow probang into the rumen, or to push a trocar, fitted with a tube, into the left side midway between the last rib and the haunch bone. In lieu of this instrument, a pen-knife and large quill or hollow cane, will answer on an emergency. These failing, refer to "Crammed Stomach."

In RELAPSING HOVE, which comes on whenever a cow with weak digestion, or disease of the third stomach, or intestines, eats green food, the treat-

ment consists in regulating the diet, in giving 10 drops of *Nux Vomica* three times a-day during the intervals, and treating the attacks when they arise in the above ways.

FOOD, ETC.—In all cases of Hove, the greatest attention must be paid after the attack is over to the kind of food and the prevention of gorging. Boiled roots are good.

3.—INDIGESTION.

IN THE HORSE.

Indigestion is derangement of the process by which the food is naturally digested—is disorder rather than structural disease of the stomach, and probably also, though in a less marked degree, of the liver, intestinal glands, &c.

It arises from giving indigestible food; allowing too much food after giving too little; eating too much at too long intervals; imperfect chewing either from diseases or irregularities of the teeth, or from greed; severe work soon after a meal.

The tongue is foul and coated; the mouth slimy; the dung dry and mixed with undigested oats, or hard, glazed, and offensive; the urine

scanty and thick. The appetite is unnatural or capricious; sometimes the horse eats very greedily, at another he eats very little, or takes one food and leaves others; or he prefers dirty straw to the best oats and hay; or he licks the walls and swallows the plaster from it. He soon gets out of condition, loses flesh, does not thrive, and his skin looks "hide-bound." He sweats easily, and does not work so well as formerly, being weak and spiritless. Very often, he has a short, hacking, irritating cough. It is evident from his manner that he sometimes suffers from smart colicky pains.

TREATMENT.

Give *Nux Vomica* for depraved, fastidious, changeable appetite; confined bowels; dung hard, lumpy, and glazed on the surface with mucus; tongue furred and slimy.

Arsenicum is a most valuable remedy when the horse is weak and unthrifty, eats little or nothing, coughs frequently after eating or drinking, &c.

Another good medicine for somewhat similar symptoms to the last is *Ferrum* which should be given if *Arsenicum* does no good.

DOSE.—5 grains of *Ferrum* thrice daily in a handful of mash; of *Nux* and *Arsenicum* 10 drops in a wine-glassful of water.

FOOD, ETC.—Soft and easily-digested food should alone be allowed, and in small quantities at short periods. The horse should be moderately exercised, and not over-worked.

CASE I.*

On October 5th, 1859, I was called to a horse belonging to Mr. Holland, baker, Manchester. When this horse was bought, three months ago, he was pronounced sound by a veterinary surgeon, although suffering from a cough; *he has been under allopathic treatment ever since without any benefit; and the V.S. now states that "the lungs are rotten."*

The symptoms are:—Pulse and breathing unaffected; tongue covered with a dirty yellow fur; mouth contains slimy saliva; offensive smell in mouth; bowels constipated; urine pale-brown in colour; coat dry, staring, and devoid of gloss; abdomen tucked up; appetite fastidious; cough frequent and dry; the horse is in poor condition and does not gain flesh.

Treatment:—To have Arsenicum and Nux v. 1, 10 drops thrice a-day alternately.

14th Since last report the horse has steadily improved; and he is now all right.

IN OXEN.

In cows, the symptoms do not vary much from those of the horse. The milk is poor in quality and scanty; purging, belchings, and retching are also observed.

* Quoted from my "Veterinary Homœopathy Illustrated," &c.

TREATMENT.

The same as in the horse, both as respects the medicines to be administered, the doses, and food.

CASE II.*

On March 12th, 1860, I visited a cow belonging to Mr. Fletcher, Longsight, near Manchester. Of late this cow has refused her food, and vomited immediately after each meal. Neighbouring wiseacres say she has the lung disease, and had better be sold. My opinion was asked on this point.

The symptoms are:—Breathing and pulse unaffected; very little appetite; vomits hay directly it is swallowed; rumination suspended; dung scanty; almost total absence of milk; extreme emaciation—reduced to “a bag of bones.”

Nux Vomica was given three times a-day. In a fortnight the cow was able to eat and digest everything put before her, and she had greatly improved in condition. In two months after she was the fattest, the finest, and the best milker in the stock.

IN DOGS.

The appetite is vitiated and impaired: vitiated, because the dog has a keen relish for spiced, or sweetened, or stimulating food, or for paper, string, &c.: impaired, when the dog turns up his nose at wholesome food, or eats a little of it with feelings of ill-concealed disgust. There is considerable thirst and occasional attacks of sickness. In

* Quoted from my “Veterinary Homœopathy Illustrated,” &c.

some cases a quantity of fluid bobs up from the stomach into the mouth, and is slavered about. Occasional attacks of diarrhœa are not unfrequent, alternating generally with constipation; or constipation alone may exist. Flatulence is another frequent symptom of indigestion. Many skin-diseases follow in the wake of this disorder. Excessive fatness, accompanied by asthmatic breathing and cough, is induced by it. Excessive constipation, foulness of the breath, inflammation of the gums, &c., may be cited as some of the effects of long-continued indigestion. Indeed there are few chronic diseases in the production and continuance of which indigestion does not play an important, or even an exclusive part.

TREATMENT.

The most suitable remedies are:—

Nux Vomica when the dog refuses to eat, or vomits what he does eat, when the bowels are confined, &c.

Carbo v. is a good remedy for flatulence, purgings, distention of the stomach and bowels, and some kinds of cough, attending indigestion; also, when fluid rises from the stomach into the mouth.

Mercurius is indicated when the liver is deranged as well as the stomach—when the skin and eyes have a yellow colour, &c.

DOSE.—From 2 to 5 drops thrice a-day.

4.—STOMACH STAGGERS.

SLEEPY STAGGERS.—MAD STAGGERS.

IN HORSES.

This name is applied to an assemblage of symptoms, which show that both the stomach and the nervous system are affected. The stomach is more or less crammed with hard and undigested food, as much as 60lbs. weight having been found in it. It is more common in some districts and seasons than in others. Rank grasses, the common rag-weed, rye-grass containing ergot, &c., have been blamed for its production; but it is also met with after the horse has eaten any other food, especially if he be old, fed on bad food, or be exhausted from illness, over-work, or ill-usage. It often arises when a horse is long fasted and then is allowed to swallow, without slowly chewing, too much oats, bran, hay, &c. Farm and cart horses are the greatest sufferers.

The bowels are confined, the dung hard and slimy, and little or no urine is passed. Occasionally pains come on in the bowels, and then the animal paws the ground, looks round to his flanks, and lies down and rolls over. Sometimes wind is belched up. Partial sweats break out.

The mouth and eyes are tinged yellow. The horse's manner is the most notable feature in the symptoms. He is dull and sleepy, hangs his head on the manger or rests it against the wall; the eyelids are closed or nearly so; the eyes are partially or wholly insensible to light; from this condition a strong blow or loud noise may awake him; but presently the same stupor steals over and masters him again. Sometimes the muscles are seized with sudden twitching, and fore-legs drop as if he would fall. The breathing is slow, laboured, moaning, or noisy from throat-rattle. The pulse is full, frequent, and oppressed.

These symptoms either abate, leaving the horse more or less affected in his sight, and with a weak stomach; or they change their character and indicate excitement of the brain.—**MAD STAGGERS**, which is a condition occurring either as the advanced stage of stomach staggers, or without the sleepy symptoms above described. As the symptoms of this stage, or form, bear a close analogy to those of inflammation of the brain, the remarks on this latter disease should be referred to.

Now, the horse shivers all over;—runs his head against the rack, manger, or wall; stamps wildly as if he were in a passion; plunges about the box; kicks out; rears upwards, and falls backwards on the ground, panting for breath, and sweating all over; or jumps with his fore-feet

into the manger. The eyes are thrust out, fixed, and wild looking, and the pupils dilated. The breathing is quickened and the nostrils opened out wide; the pulse hard and accelerated. These attacks recur until one more severe than the rest ends life, often preceded by vomiting, as a sign of ruptured stomach.

IN OXEN.

Stomach staggers is known in oxen as "grass staggers," and "fardel-bound." Most frequently it is in the *omasum*, manyplies, or third stomach that the food is lodged and arrested, although the first and second stomachs are also involved, but to a minor extent. The secretion of the manyplies is absent, and the food is hard and dried into a solid cake. This affection is most common in the spring when stall-fed cattle are first turned out to grass.

In rinderpest, the third stomach is almost invariably crammed with hard food.

The symptoms do not differ materially from those of the analagous disease in the horse; there is the same stupor in the early stage, and the same wildness in the latter. In addition, cudging is, of course, suspended, the belly is often "hoven," and there may be slight purging. Care as to diet after the urgent symptoms have been overcome is even more essential in cows than in the horse.

TREATMENT.

The treatment of stomach staggers consists, in the first instance, in removing the cause, which is an accumulation of food in the stomach, by means of mechanical agents calculated to expel the mechanical obstacle. It is much more difficult in animals than in man to use the stomach-pump with effect, especially when we wish to remove a mass of food often hard, always bulky; indeed, the difficulties are so great as to render this measure practically useless. As much water should be allowed as the animal will drink, no food should be offered, and glysters should be thrown up freely. At least one dose of croton, or aloes ought to be administered in order to obtain the evacuant action of a powerful cathartic. In addition, *Belladonna* when there are present the symptoms above described of mad staggers; *Opium* for those of sleepy staggers; and *Nux Vomica*, after the urgent symptoms are over, when the stomach is weak and unable to digest food properly.

Dose.—10 drops in a wine-glassful of water, or in a draught of water, every hour or two according to the violence of the symptoms. One dose of *Nux* four times a day, for the subsequent weak digestion.

For some weeks, great care must be taken to give soft food in small quantities frequently.

5.—CRAMMED STOMACH.

IN OXEN.

The elegant name for this state is "impaction of the stomach." Of all animals, cows are the most subject to it. The rumen, paunch, or first stomach, is more or less stuffed with undigested food, and the beast's life is thereby very seriously endangered. It may arise from eating grains, bran, &c., and from filling the stomach with grass before there has been time for such a generation of gas as would lead to the production of "Hove." Under some circumstances a small quantity of herbage will give off a large amount of gas; under others, the paunch is considerably filled with food and then a comparatively small quantity of gas is evolved. Hence, Crammed Stomach and Hove have many symptoms in common, only they are less quickly produced and less severe in the former than in the latter complaint. The two may be distinguished by crammed stomach wanting the peculiar drummy sound on striking the paunch, by pressure on the swelling on the left side leaving the marks of the clenched fist, and by no gas escaping when the hollow probang is introduced, or the swelling punctured.

TREATMENT.

The operation of "Paunching" must be performed without delay; thus:—Having properly secured the animal, plunge a sharp carving-knife into the swollen paunch through the skin at a point midway between the haunch bone and the last rib, and about nine inches from the spine (back bone); and, whilst drawing out the knife, cut a slit six inches downwards. Grasp and hold fast the edges of the wound in the stomach and side of the belly, otherwise the food will drop into the belly amongst the bowels and set up a probably fatal inflammation. Then, lift out the food with the hand. When this has been done, sew up the edge of the wound in the paunch with three or four single stitches of fine cat-gut; and lastly, secure the wound on the cow's side by passing through its lips as many stitches of flexible wire. Only soft food is allowable for some days. The operation is usually successful and speedily recovered from.

Afterwards, treat as for "Indigestion."

IN DOGS.

Although the act of vomiting is very readily excited in dogs, yet it sometimes happens that they gorge themselves with food, and the consequent over-distention of the stomach, paralyzes, so to

speak, the contractile power of that viscus. The fluid portion of the food is speedily absorbed, and a solid mass remains, upon which the digestive juices have little or no solvent effect. Repletion of the stomach to so great an extent as to produce disturbance of the system is not a very frequent occurrence, and is almost always met with in pampered dogs with a vitiated appetite, or in dogs that have undergone involuntary starvation.

The symptoms in themselves do not suffice to point out the real state of the case; but if a dog, after having been known to devour a large meal, should be attacked with colic, convulsions, retching and abortive vomiting, distension of the belly, obstructed and laborious breathing, and stupor, there can be little difficulty in arriving at a correct opinion as to what is amiss.

TREATMENT.

Of course the treatment of such a case consists in getting rid of the offending matter by the mechanical agency of an emetic, such as *Tartar Emetic*.

DOSE.—1 to 4 grains according to the dog's size.

Afterwards, give the same remedies as for "Indigestion."

6.—CRIB-BITING AND WIND-SUCKING.

These two tricks, or symptoms of disease, whichever they may be, are confined to the horse; they are mentioned here because they are either the results of a disordered stomach, or frequently lead to it. Certainly both lower the horse's condition, and would seem to render him more than usually liable to indigestion and attacks of colic. Many horses acquire the habit by imitation; therefore those addicted to it should be kept apart from others.

A crib-biter fastens his front teeth into the manger, curves his neck, and sucks in air with a peculiar noise.

A wind-sucker presses his lip against some hard body, brings his feet together, arches his neck, and swallows air, without fixing the teeth. After either of these two performances the belly becomes enlarged and drummy.

TREATMENT.

There are various contrivances in the shape of racks and straps for the prevention of both practices.

If symptoms of indigestion be present, consult the remarks on that subject in this chapter.

In the eye of the law, crib-biting which has not proceeded so far as to induce a disease, or

change of structure, or to interfere with the horse's usefulness, is not unsoundness, but a vice; and a purchase under a warranty that a horse is "sound and free from vice," is void.

7.—STOMACH PAIN IN THE HORSE.

I have often observed a class of symptoms which I believe to arise from pain in the stomach. They are as follow:—The general symptoms resemble those of colic; the horse shows by his manner, restlessness, and looks, that he is in pain; he turns his head round to the left side and puts his nose there behind the left elbow joint. Besides, wind (gas) rises up from the stomach, and in its passage along the food-tube causes a waving motion similar to that—only in the opposite direction—which takes place when water or food is swallowed.

It is in reality a form, or a symptom of indigestion.

TREATMENT.

I have never failed with *Antimonium Crudum*, and therefore it is needless to refer to any other remedy.

DOSE.—10 drops in a wine-glassful of water every half hour, or hour, until the symptoms are relieved.

8.—GASTRIC CATARRH IN DOGS.

The disorder of the stomach which bears this name is the result of aggravated indigestion.

The symptoms seem to depend on congestion of the mucous membrane of the stomach, with excessive secretion of the natural mucus. There are at first indications of febrile disturbance, as shown by quick pulse, hot nose, congested conjunctiva, loss of appetite, &c. The dog manifests the usual signs attendant on severe pain in the abdomen; and there is obstinate constipation. The efforts to vomit are frequent and strong; but unsuccessful. After a while, the severe retchings bring up a large quantity of thick mucus, which may, or may not be tinged with bile, and even with blood. The pulse becomes weaker and more frequent, bloody fæces are voided with much straining, and death ensues.

There is a milder form of this disease, which is very prevalent in town-pampered dogs. I have had many such cases under treatment. This disease is known by the name of "husk" amongst dog-fanciers, and it is so called by some writers on dog diseases. To all appearance the dog is comparatively well; the appetite is little if at all impaired, and the animal is in good spirits. The chief symptom is a cough, hard, loud, occurring

in violent paroxysms either during the day or night, each paroxysm ending in retching. The matter brought up often sticks in the throat from its tenacity, and is swallowed; or it is discharged from the mouth when less sticky, and is then seen to consist of frothy mucus. Similar paroxysms recur at longer or shorter intervals. The animal gradually wastes and gets weak.

The cough and mucus might be supposed to point to bronchitis as the disease, but I have repeatedly examined the chest, and have never found the physical signs or quickened pulse and respiration which betoken bronchial affections.

TREATMENT.

Aconitum should be given when the pulse is quick, the skin hot, the nose dry, and the other symptoms of febrile excitement present.

Nux Vomica is indicated when the bowels are costive, the abdomen painful, and the mucus or bilious retchings frequent.

Mercurius is specially indicated when there are frequent vomitings of bile or mucus.

Arsenicum should be administered in the last stage when there is exhaustion, accompanied by purging, &c. This is also the sovereign remedy for the milder and more frequent form of gastric irritation and catarrh.

DOSES.—2 to 5 drops every four hours.

FOOD, ETC.—Milk, arrowroot, and other bland foods should be given with the spoon, or thrown up the bowel. The chief point as to diet is to give food in small quantities.

9.—GASTRITIS OF DOG.

Gastritis, or inflammation of the stomach, may be caused by irritant poisons, and the inflammation in that case extends the whole length of the bowel also.

The most frequent cause of gastritis is the continued ingestion of stimulating food, or of food otherwise unsuited to the requirements and habits of the canine race. Favourite dogs are especially affected with gastritis, from the circumstance that improper food is either given to them or they are allowed to eat it.

The form of gastritis which is thus produced takes on the character of aggravated indigestion. The most marked symptom is incessant vomiting, —whatever is swallowed is rejected,—and the effort of vomiting is evidently attended with more or less pain. The thirst is extremely urgent and lapping cold water or licking the cold ground seems to give relief. The appetite fails, the nose is dry, the breathing quick, the countenance is anxious, the legs are cold, &c. The dog lies

stretched out with his belly in close contact with the cold ground,—a position which in itself is almost sufficient to distinguish gastritis from any other disease.

TREATMENT.

The most suitable medicines in gastritis are the following:—

Aconitum when the attack is attended with quick pulse, hot skin and nose, and the other indications of febrile action.

Arsenicum when the vomiting is incessant and painful, the thirst unquenchable, the pulse small, the legs cold, and the countenance expressive of anxiety.

Mercurius when the vomit consists of biliary matter, when the thirst is insatiable, the bowels costive, and the tongue foul.

Nux Vomica when the attack is the result of long-continued indigestion, or has been directly induced by drinking cold water; when the bowels are confined, and the retching frequent and painful.

DOSES.—2 to 5 drops every two or three hours.

The treatment of acute gastritis caused by poisons consists in expelling the poison from the stomach, and in giving the appropriate chemical antidotes.

FOOD, ETC.—The diet should consist of bland food, given frequently in small quantities. Milk, flour, arrowroot, gruel, &c., are amongst the best. Should these be immediately rejected, it may be necessary to throw up nutritive enemata to prevent starvation. The quality, quantity, and kind of food should be very carefully attended to for some time after the acute symptoms have ceased. The dog should be allowed to lap up as much cold water as he likes.

10.—LOSS OF APPETITE.

IN ALL ANIMALS.

This is not a disease in itself, but a symptom of many different diseases, both acute and chronic. It is one of the first in diseases attended with febrile excitement. It is associated with diseases of the teeth, mouth, and stomach; and after recovery from serious illness, some loss of appetite remains.

TREATMENT.

When an animal appears to be in tolerable health, but does not eat as he ought to do, give *Arsenicum*, or *Nux Vomica*, night and morning;

or one medicine in the morning, and the other at night.

Dose.—1 grain in a handful of mash for horses and oxen ; 5 drops of the tincture for sheep and pigs ; 2 to 5 for dogs.

Of course, an examination should be made to ascertain whether or not actual disease exists. The mouth in particular should be explored for irregular teeth, &c., especially if the animal "quid" his food. See remarks on this subject at page 38.

CHAPTER VI.

DISEASES OF THE BOWELS.

1.—INTESTINAL WORMS.

IN HORSES.

THE true worms found in the horse's bowels comprise three species of tape-worm; namely, the *Tæniaplicata*, *T. perfoliata*, and the *T. mamilana*; a large, round worm, the *ascaris megalcephala*; and another, often called a thread-worm, the *strongylus armatus*.

The first kind are rarely met with, and when they do exist, give rise to little, or no disorder. The presence of worms in general is denoted by staring, hind-bound coat; appetite at one time poor, at another greedy; loss of flesh and condition; occasional attacks of colic, or of diarrhœa, dry cough, &c. When the worms are found passing from the bowels, all doubt is removed as to the cause of their symptoms.

IN OXEN AND SHEEP.

In the first animals' bowels, the tape-worms are called *Tænia expansa*, and *T. denticulata*; and the round-worms, the *strongylus radiatus*, and the *ascaris lumbricoides*.

The *Tænia expansa*, and several species of *strongyli* are found in sheep, and produce much the same symptoms as in other animals.

IN PIGS.

The worms found in the pig's bowels are *tæniæ*, *ascarides*, and a large round worm, with a long name—the *echinorhynchus gigas*; to young pigs most injurious. This animal is much disturbed by worms—the loins are weak; the hind legs stiff; the eyes sunken; there are constant grunts, and biting and fighting one with another. In bad cases, the weakness is so great as to induce fatal exhaustion.

IN DOGS.

Here, we meet with the *Tænia serrata* and the *T. cucumerina*; and the round, maw-worm—the *ascaris marginata*.

For a full, and interesting description of worms in the dog, and their relation to man and the lower animals, I beg to refer the reader to my work "on Diseases of Dogs," from which the following detail of symptoms is taken:—

A dog affected with worms in the bowels is

usually dull and depressed, uneasy and restless, utters doleful cries and howls, and becomes unsociable in disposition and irritable in temper. The hair is dry, shaggy, foul, and destitute of the natural gloss; appetite variable, and often ravenous; the breath offensive; and the nose dry and hot. Notwithstanding the greedy appetite, emaciation and weakness come on. Attacks of diarrhoea occasionally alternate with constipation; small lumps of mucus are voided, and little bits of excrement. Paroxysms of colic are frequent; fits attack young dogs especially. A tense and enlarged state of the belly, and a short, dry, irritable cough, are also occasionally symptomatic of worms. The "maw-worm" induces intolerable itching of the rectum, but rarely any of the more serious symptoms as above. Chobart records having seen many dogs vomit balls of *Ascarides* (*Strongylus trigoncephalus*?). These dogs had vertigo, convulsions, and coma, &c. The "round-worm" sometimes crawls into the stomach, and even upwards into the nostrils, and then sets up great irritation. The severe symptoms are produced only by the tæniæ, or when the other worms are present in large numbers.

TREATMENT.

In the treatment of worm cases we must, firstly, destroy and expel the worms; and, secondly, give

such medicines as will improve the mucous membrane of the bowels and its secretions.

For the horse, as a mechanical evacuant, give two croton beans powdered and mixed with a handful of bran mash. Then for the symptoms above described as the result of worms give 1 grain of *Arsenicum*, first trituration, night and morning in a little mash; or, this failing to do decided good after having been administered for two or three weeks, *Ferri Sulphas*, in the same way, in 5 grain doses.

For oxen, as an evacuant and as a poison to the tape-worms, *turpentine*, half-an-ounce mixed with olive oil; and as constitutional remedies *Arsenicum* and *Ferri Sulphas*, as for the horse.

In sheep and pigs give half these quantities.

In dogs, powdered *Areca Nut*, 2 grains for each pound of the dog's weight mixed with oatmeal gruel, is one of the best for tape-worm. It may be given in this way, once a week for several weeks with the best effect. If necessary, from 2 to 5 drop doses of *Arsenicum*, or of *Ferri Sulphas* may be given night and morning afterwards. *Cina* is also good against round and maw worms.

The operation of the evacuant medicines should be watched, and tape-worm when expelled either whole or in pieces, should be burned or deeply buried.

2.—THE HORSE BOT.

The "bot" is the maggot-form of the breeze, or gad-fly, of which three species take up their temporary abode in the stomach and entrails of the horse; they are the *Æstrus Equi*, or great spotted horse-fly; the *Æstrus Hæmorrhoidalis*, or red tailed horse bot; and the *Æstrus Veterinus*.

The natural history of these creatures is a curious one. Towards the end of summer the fly deposits its eggs on the inside of the horse's knees, on his breast, or on his lips; the eggs are covered with a gluey fluid which causes them to stick to the hair of these parts. Several hundred eggs may be thus laid on a single horse. They set up considerable irritation and itching, to relieve which the horse licks, or nibbles the skin, and in this manner they are conveyed into the stomach—a transition indispensable to the hatching of the eggs. Here the larvæ at once fix their heads, by means of sharp hooks, into the mucous membrane, where they hang in clusters. During the following winter and spring they undergo no further change, but gradually grow larger. Towards spring, being ready to advance another stage, they loosen themselves, and are discharged from the body along with the fæces. They then

find a convenient hiding place, where they change into the form of chrysalis, and sometime afterwards into that of a fly. The second species mentioned above is commonly called the "lip and fundament bot," from two peculiarities—it fixes its eggs about the horse's lip, and after quitting the stomach often adheres a considerable time to the end of the anus.

If a horse out at grass in autumn is observed to be uneasy, going awkwardly, and licking the inside of his legs, or his breast, or, when the lip-fly approaches him, tossing his head and galloping off, there is strong suspicion that he will be troubled with bots next summer. When bots exist in the stomach, there may be no symptoms whatever; but when they are in large numbers, various symptoms of indigestion, attended with loss of condition and flesh, usually arise. All doubt is dispersed when they are seen passed with the excrement, or hanging at the anus.

TREATMENT.

Nothing can expel them from the stomach; at the proper time in their development they come away of themselves. The best remedies for the effects produced by them are *Arsenicum*, or *Ferri Sulphas*.

The first medicine should be given for two or

three weeks; and then, after an interval of three days, the second, in case there should not be decided improvement.

In some cases, especially those attended with symptoms of colic and indigestion, I have seen good effects from *Nux Vomica*.

DOSES.—10 drops of *Nux* and *Arsen.* night and morning; 2 grains of *Ferri Sulph.*

3.—CONCRETIONS—DUST AND HAIR BALLS.

IN HORSES.

A small pebble, or other foreign body, when accidentally swallowed, is often found to be the centre of deposits of earthy matter, leading to the formation of stones, which vary greatly in size. These hard earthy stones are occasionally found in the horse's stomach, but more frequently in some part of the large intestine. They are met with oftener in some districts than in others—owing probably to the larger amount of calcareous matter in the water drunk.

The dust ball is composed of oats, the dust of

oats or barley used as food, and mucous material mixed up and matted together. They often acquire a very large size, and there are often several of them in the same horse. They begin to be formed in the stomach around any body that will act as a centre-point for deposits, and afterwards pass into the bowels.

IN OXEN, SHEEP, &c.

Hair balls are very common in these animals. They consist of hair, thickened mucus, and other deposited matters, and begin from swallowing hair when the hide is licked. These usually remain in the stomach, and give rise to no particular symptoms. Besides stomach stones, the dog is liable to have hair balls in the bowels, as well as stony concretions formed around foreign bodies.

The balls often attain an immense size without causing any appreciable derangement of health. Usually, however, they set up obscure symptoms of general ill health—the animal gets thin, weak, and dull, and has frequent attacks of colic. Towards the last, the bowels become constantly costive, the belly swollen, the back arched upwards, and the breathing quickened. When attacks of pain come on, the eyes have an anxious look, and, in the case of the horse, he sits on his haunches like a dog.

TREATMENT.

If it were possible to be sure of the existence of these stones when they are small, it would be comparatively easy and safe to expel them through the bowel by means of a purge; but as this knowledge is wanting, and as the mass when once it has grown large cannot be made to pass along the bowel, nothing can be done but to give relief. A purge is then worse than useless, and is certain to do mischief. During the attacks of pain, treat as for colic.

4.—COSTIVENESS.

IN HORSES, OXEN, &c.

In all animals, costiveness is rather a symptom of many diseases, than a distinct disease of itself; nevertheless, it often assumes the importance of a special disorder in the lower animals from the circumstance that the nature of their food and the necessity for frequently changing it, induce this condition, which often leads to loss of appetite, and pain in the bowels. It is apt to come on from eating old rough grass—the tough fibres of which resist digestion and softening, and lace together so as to cause accumulation, especially in the rectum.

Newly-born foals are very liable to costiveness of a dangerous character. The excrement existing in the bowel before the foal's birth cannot be discharged, and symptoms of severe colic come on.

Oxen are likewise occasionally the subjects of simple costiveness, and calves particularly so when first placed on dry food.

In all such cases, we find loss of appetite, uneasiness, indications of belly-ache, straining efforts to relieve the bowels, hardened excrement, &c.

IN DOGS.

The dog's bowels naturally tend towards a costive condition, and this is favoured by wrong food, and especially by that acquired restraint over the bowels which follows the cultivation of habits of cleanliness, especially in house and pet dogs.

Indigestion, mange, foul breath, bad teeth, severe straining, and colic are the main symptoms.

TREATMENT.

Horses should be regularly exercised, and be fed on boiled food, the quantity of oats being reduced for a time. Dogs also should be exercised, and have well-boiled oatmeal gruel, and occasionally bits of liver. In all animals, the diet should be carefully regulated according to the state of the

evacuations. Injections of warm water and soap should not be omitted, especially if the last portion of the bowel be stuffed full. Back-raking the horse is not free from danger. In the smaller animals, it may be necessary to scoop out the accumulation when it lies in the rectum. When colic is present, treat as directed for that complaint.

The best medicines for constipation are *Nux Vomica* and *Sulphur*—the former to be given for the first week, and the latter, for the second; and so on in turns as long as may be required. Or, one may be given at night and the other in the morning.

DOSES.—10 drops night and morning for horses and oxen; 5 drops for foals, calves, sheep, and pigs; 2 to 5 for dogs. Many cases do best with 1 grain night and morning of *Nux Vomica*, first trituration.

5.—COLIC—GRIPES, &c.

IN HORSES.

This, one of the most common and fatal diseases to which the horse is subject, depends on spasm, or cramp of the muscular coat of a portion of the bowel. It arises from a variety of causes—such

as dust-balls and stony concretions, masses of undigested food, and hardened excrement obstructing the bowel—from over-eating, as when a horse gets loose at night and walks into the corn bin; or naturally has a greedy appetite and gorges himself; or, during the day, has the nose-bag put on whenever he stops, and when brought home at night, is again fed freely or allowed to eat as much hay as he likes—from irregular feeding, as when he is kept short at one part of the day and liberally supplied at another—from exhaustion, following hard work and coupled with improper feeding—from exposure to cold, or drinking cold water when the body is hot—from the presence of worms, &c. In the great majority of cases, the cause is some impropriety in feeding, and, therefore, if common-sense attention were paid to this point, there would be many fewer cases of colic. When a horse is frequently attacked with colic, there is a strong presumption that he has dust, or stone balls in the bowels, especially if the general health and condition breaks down.

Let me sketch the picture of a griped horse. Suddenly, he becomes restless, walks about, crouches, paws the ground, kicks his belly with the hind feet, looks often round to his side, &c. Presently, he lies down, and rolls about with more or less violence; sometimes resting on his belly and looking round anxiously at his flank, some-

times stretched out full length, sometimes turned on his back, in a state of comparative calm. The pain now remits—he gets up, shakes himself, and begins to eat, or nibble. Before long, another attack, more severe than the first, seizes him, and the old symptoms are repeated with greater violence than before. He throws himself about wildly, utterly indifferent to the injuries he self-inflicts; his eyes stare and look anxious; he breathes fast; his skin is more or less covered with sweat; he tries to stool but passes little or nothing; he perhaps voids a few small hard lumps of dung. After several such displays, the attacks become milder and fewer, and finally cease; or they increase in number, and then he exhibits indications of exhaustion; walks unsteadily, or reels round the box; finds no temporary relief save when lying against the wall on his back; his muscles twitch; his breathing is quick and groaning; his pulse small and hurried; he breaks out in patches of cold sweat; the retracted lips expose the clenched teeth; and ere long, death closes the painful scene.

Colic may continue from half-an-hour to a day, and may lead to death from rupture of the bowel, or of the midriff, or from twisting of the bowel.

There is another form of this disease, called by some *Flatulent Colic*, or *Acute Indigestion*,

which arises from eating too fast, over-loading the stomach, drinking too much water, working on a full stomach, eating turnips, carrots, potatoes, rank grass, &c. The food either remains undigested, or it ferments and gives off gas which distends the stomach and bowels. It corresponds to the "Hove" of oxen and sheep. The symptoms are similar to those first depicted; with the addition, that the belly is more or less bloated, and drumy when struck—that rumbling noises are heard within, and wind discharged from the bowels—and that the horse frequently retches, and may succeed in vomiting. This is the more dangerous of the two forms, and very frequently terminates in rupture of the stomach.

IN OTHER ANIMALS.

Oxen are not so often the subjects of this disease as horses and dogs; when it does attack them, the causes and symptoms are the same. Dogs, during the severity of the attack, arch-up their back, draw their legs under the belly, and pull the tail between their hind legs.

TREATMENT.

Aconite is indicated by the following symptoms:—when the attack has been induced by a chill, or by drinking cold water when the

body was hot; when the animal's behaviour, as above described, shows that he is in great suffering; when he frequently tries to pass urine and dung; when the belly is tender, swollen, and wind rumbles in it.

Ammonium Causticum is, according to my experience the only single medicine which can speedily cure the largest proportion of colic cases; it is more especially suitable for "windy colic."

Nux Vomica is the best remedy when the attack arises from eating indigestible food, or from over-eating, or from accumulation of excrement; when hard, dry lumps are discharged; when the horse makes straining efforts to urinate and dung, without any result, or with but little; when the pain is not of the most violent character, and the horse does not knock himself about savagely, but lies a good deal on his side, restless and uneasy, and every now and then looks round to his side.

Colocynthis is indicated in cases attended with most severe pain, causing the animal to roll about violently; also when the attack appears to result from eating green food, and the belly is much distended with gas; and when wind and watery motions are discharged by the bowel.

DOSES.—10 drops of any of the above medicines for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs. Repeat each dose every fifteen, or thirty minutes, according to the violence of the symptoms.

There are several other medicines which are of use in exceptional cases, but the above are sufficient to cure the great majority, and that more speedily than the ordinary plan of giving turpentine, purges, &c. Injections of warm water should be thrown up occasionally. The operation of "back-raking" relieves the rectum, but injections are safer and just as effectual. I have known stable-men and grooms thrust their hand through the bowel, and, of course, thus destroy the horse. The animal should be turned into a loose box, with plenty of straw to roll on. Compelling a griped horse to walk and trot is downright cruelty, and a most dangerous practice. After the attack is over give soft food, and exercise gently for two or three days.

CASE.

On October 24th, 1855, I was sent for in great haste to see a horse belonging to Messrs. Syddall Brothers, Chadkirk, near Manchester. During the last twelve months this horse has had several attacks of colic, which have always yielded to *Aconite*. It has given only slight relief in the present attack, which has lasted five hours. I found the following symptoms:—the horse is lying stretched out full length; when made to rise, he is no sooner up than he draws himself together and drops down again; he turns his head and frequently looks at his abdomen; he has voided a small quantity of dung, covered with mucus; the eyes roll about, and the eyebrows quiver, &c.

To have *Nux Vomica*. There was no return of the pain after the first dose; twenty minutes after the first another dose was given. *In an hour from the first dose the horse was standing up, eating hay, and well.**

6.—DIARRHŒA.

IN HORSES.

The frequent discharge of liquid excrement, uncoloured by blood, which constitutes diarrhœa, is a very frequent symptom of disease. "washy" animals—those with narrow loins and great width between the ribs and haunch bone—are peculiarly subject to it; some horses without this make are constitutionally predisposed to it; hunters, excited with going to hounds, are often troubled with it. Change of diet, bad or improper food, often induce it, especially in association with over-work. Super-purgation is the result of giving purges in too large doses, or too frequently—a practice much less common now-a-days than in past years, and one that killed many a horse. Purging also arises towards the end of influenza, and other diseases attended with prostration, and is a constant symptom of disordered liver.

The evacuations are passed frequently, with straining, and discharge of wind. There are often

* Quoted from my "Veterinary Homœopathy Illustrated."

indications of belly-ache; such as uneasiness, looking round to the flank, pawing the ground, rolling over, &c. When digestion is imperfect, the oats are passed undigested. The discharges are offensive, and mixed with more or less of slime. In bad cases, diarrhœa is a dangerous disorder in the horse, and may destroy life. This event may be apprehended, when the legs are cold; the surface covered with cold sweats; the breathing quickened; the pulse small and weak; the appetite gone; the strength rapidly reduced; and the flesh wasted way.

In some cases, diarrhœa is of the lingering (chronic) form.

The following case illustrates the symptoms and treatment of a severe attack of diarrhœa excited by an over-dose of aloes, in a horse previously weakened by work, and bleeding:—

CASE.

In July, 1853, a cart horse belonging to Mr. Tait, bleacher, Heaton Mersy, near Manchester, was unwell, and the farrier engaged on the premises thought the best plan to restore the animal to health would be to abstract six quarts of blood and give a dose of aloes.

I found the following results:—Pulse 84, and so feeble and thread-like that it is with difficulty it can be felt at all; breathing 40 per minute, and laborious; glassy staring eyes; legs, face, and nose cold as death; general appearance haggard in the extreme; offensive smell from mouth; appetite quite gone, in fact has neither eaten nor drunk within the last four days;

extreme debility, so that when made to move, he staggers as if he were about to fall; during four days the purgation has been excessive, and now a dirty water-like fluid is streaming down his hind legs.

To have *Aconitum* and *Arsenicum* of the first dilution, in 10 drop doses, every three hours alternately.

On the 5th day from my first visit, the horse's pulse and breathing were normal, his appetite had returned, and, in short, his improvement was so great, that he did a little work. On the following day he resumed his ordinary task of carting bleached goods between his owner's works and Manchester.*

IN OXEN AND SHEEP.

In oxen, diarrhoea is a frequent symptom of the lung disease and rinderpest. It is very common when the diet is changed, and when cattle are turned into new grass pastures. Sucking calves often have the "white scour," from the milk they drink resisting digestion, and passing out curdled; it then acts as an irritant on the bowels. Lambs are likewise subject to this form of purging when they are suckling, and to another form arising from eating too rich grass in spring.

CASE.

Mr. Johnson, farmer, Moston, near Manchester, called upon me on September 16th, 1857, respecting a cow. The only particulars of her history that could be learnt were these:—The animal began to be purged six weeks ago, and although numerous compounds, or

* Quoted from my "Veterinary Homœopathy Illustrated."

"cow drinks" had been given, the ejections continued as copiously as ever. She had, consequently been reduced to a heap of bones; the secretion of milk was suspended, and the appetite gone.

I gave her *Camphor* and *Veratrum*, each in 10-drop doses, to be given every three hours alternately. The owner reported, after these medicines were all administered, that "the cow is quite well, and is coming to her milk."^{*}

IN DOGS.

In the dog, the causes of diarrhœa are much the same as in other animals. Two forms are met with—the acute and the chronic.

The *acute* state may be preceded or accompanied by colicky sufferings; acrid, offensive matter is thrown up from the stomach; the vomiting, which is an early symptom, is often persistent and difficult to subdue; the vomit is not relished as a meal, as is the dog's custom; the pulse is somewhat accelerated; the thirst constant and urgent; and the belly slightly tender to the touch. The discharges are voided without much or any effort, and for a brief time relieve the dog's uneasiness. The evacuations are at first feculent, but soon become looser, more watery, more scanty, and more mucous—the strength decreasing in proportion as the discharges are more frequent and more profuse. The frequency varies according to various circumstances, which need not be dwelt

* Quoted from my "Veterinary Homœopathy Illustrated."

upon. Their character, as regards colour, consistence, smell, &c., vary according to the primary cause, the duration of the disorder, &c.; and it is not unusual to observe bile, mucus, and fæces in the same evacuation. When the disease is about to terminate in death, blood in some cases issues from one end, or from both ends of the intestinal canal; but in the majority of cases exhaustion, preceded by cold mouth and unconsciousness, terminates life.

The *chronic* state differs from the acute rather in its march than in its symptoms. The disease makes slower progress, and its duration is longer. Weakness from the excessive and long-continued discharge is a prominent feature. The anus is protruded and red, and shows hæmorrhoidal distention. Death is ushered in by utter prostration of the system, and by paralysis of the hind legs.

IN PIGS.

In this animal, the causes of diarrhoea, and the symptoms attending it, present no great variation from the same in other animals.

TREATMENT.

Bryonia should be given when the purging arises from drinking cold water or being exposed to sudden changes of temperature, whereby perspiration is checked, and a chill is received; when the evacuations are very fluid and passed almost

involuntarily; when they contain undigested food, curdled milk, &c.; when it seems likely that drinking impure water, containing vegetable matter, as on moors or marshes, has excited the attack; and when eating and drinking bring on purging.

Arsenicum is indicated when the diarrhœa is attended by violent pain in the bowels, as may be inferred from the animal's conduct; when the discharge is watery, slimy, greenish, or brownish; and when the animal becomes depressed, weak, thin, and does not eat.

Mercurius is suitable for cases attended with straining efforts, and (in dogs especially) protrusion of the bowel at the anus; when the motions are slimy, frothy, dark, and offensive, and mixed with bile and perhaps with streaks of blood; when there are retching and vomiting (particularly in dogs) &c.

China is a valuable remedy for the chronic form of diarrhœa, especially if the discharge is not accompanied by pain; when there is loss of appetite, failure of strength, and wasting.

Nux Vomica is indicated when the diarrhœa is attended with symptoms of indigestion, as mentioned at page 90; and when purging alternates with constipation.

Colocynthis is required in those cases of violent colic which are sometimes attended with looseness

Sulphur is of service when the purging is attended with eruptions—as is often the case in dogs, for example; and when milk disagrees and is the cause of the looseness, as in sucking calves and lambs.

DOSES.—10 drops for the horse and cow; 5 drops for sheep and pigs; from 2 to 5 for dogs, calves, and lambs; to be given in a tea-spoonful of water for the smaller, and a wine-glassful for the larger animals. Each dose is to be repeated every one, two, or three hours according to the violence of the symptoms, increasing the interval between each as improvement sets in. For chronic cases, one dose two or three times a-day.

FOOD.—If the food be faulty, withdraw it. Starch gruel, and wheaten flour gruel are good drinks; and for dogs ground rice mixed with a little beef tea. In cattle, change of pasture is advisable. To suckling animals, or young animals requiring milk, give from a tea-spoonful to a table-spoonful of *Rennet*.

7.—“BRAXY” IN SHEEP.

The fatal disease known amongst shepherds by this name is met with in different forms; or the symptoms vary so much as to constitute different forms; and probably totally different diseases are

confounded together under one general designation. Some cases are associated with disease of the stomach and bowels—"bowel sickness." For further particulars refer to the chapter on BLOOD DISEASES.

8.—DYSENTERY—BLOODY FLUX.

Dysentery consists in inflammation of the mucous membrane of the bowel, more especially of the large intestine and rectum, is attended with discharge of blood and lymphic shreds, and is prone to end in ulceration. Some cases of diarrhœa run on to, or become mixed in symptoms with those of dysentery.

IN HORSES.

It is less frequently observed in horses than in other animals. Bad food, exposure, and overwork strongly predispose to it; and grazing on damp, marshy pastures excites it. Young, well-conditioned horses have the acute form; and old, done-up horses the chronic.

The usual symptoms are as follow :—Pulse small and quick; breathing quickened; great

thirst; no appetite; frequent efforts to relieve the bowel, often without success, attended with symptoms indicative of pain in the belly; the straining is so severe sometimes as to force out the end of the rectum a short distance; the discharges consist of excrement coated over with congealed blood, of slimy mucus mixed with dark blood, and of lymph—in the latter case presenting a fatty appearance, and hence the old name given by the farriers “molten grease,” from a notion that the fat of the body was melted down and then ejected by the bowels. If the disease continues unchecked, the horse becomes exhausted, very weak, and greatly wasted.

IN OXEN.

Dysentery complicates rinderpest; sometimes occurs as an epizootic; and usually attacks, in this country, cows confined in dirty, ill-ventilated shippens. It also arises from drinking impure, or stagnant water; from eating rank grass, or pasturing on low marsh lands; and when over-driven cattle are fed on bad food, and are exposed to severe weather.

Shaking, dullness, anxiety, dry skin, slightly rough hair, and uneasiness of manner. In some cases the bowels are bound, the dung hard, dry, in small lumps, and pain attends their discharge; in other cases, the dung is soft and discharged

frequently, and the animal wastes and loses her appetite and spirits. In other instances, again, the purging is almost constant and severe from the first, attended with pain, straining efforts, and thrusting out of the fundament. In this stage the discharge is watery, mixed with white shreds or dark-coloured blood, with little or no dung, and it has a horribly bad smell. These violent symptoms may disappear, but the purging and wasting continue as bad as ever, or they stop for a short time, then begin again, and continue until the animal is worn out by the constant draining; or they are arrested, and improvement begins and goes on slowly. Medicine will do no good in those very severe cases in which the wasting is so excessive that the animal is reduced to a living heap of bones, the joints swelled and covered with sores, the failure of strength great, the eyes hollow and dim, the teeth loose, and the parts under the jaw enlarged; the body covered with vermin; the discharge mixed with blood or matter, and having a horrible smell, and the body bedewed with cold sweat.*

IN SHEEP AND PIGS.

In these animals dysentery arises from bad food, over-crowded, ill-ventilated styes, &c.; it is signalized at the commencement by dullness,

* Quoted from my "Outlines."

feverishness, thirst, loss of appetite, &c., and at a later period, by pain in the belly, severe straining, slimy, bloody discharges, followed by rapid wasting, and failure of strength.

IN DOGS.

Dogs often have dysentery, especially watch-dogs kept in kennels in exposed situations. Tartar emetic so frequently given to excite puking is apt to pass into the bowels and excite severe and dangerous dysentery. The same may be said of mercury, and strong purging medicines in general. The following is a good case in illustration of the usual symptoms and treatment:

CASE.

On March 26th, 1860, I was called to visit a valuable poodle belonging to Viscount Lismore, which was seized with severe illness after clipping.

The symptoms are: Frequent discharges of bloody stools, mixed with lumps of lymph, and hardened pieces of feces; severe straining; vomiting; no appetite; hard ringing cough; mouth full of tough saliva; abortive attempts to vomit after each paroxysm of coughing; inclined to hide himself out of sight.

Treatment:—To have *Merc. Cor.* 3, 3 drops every two hours.

27th.—Much better; only two evacuations at intervals of six hours; looks more lively and has eaten food. Continue medicine every three hours.

28th.—Bowels all right ; he still coughs. To have *Belladonna* 1, 5 drops every four hours.

April 2nd.—Perfectly well.

TREATMENT.

Aconite is frequently useful at the outset of the attack, when the pulse is quickened, the mouth hot, &c. ; and when there are indications of pain in the belly.

The most valuable remedy, however, is *Mercurius Corrosivus*, which is specially adapted for those cases which are characterized by severe straining ; protrusion of the end of the bowel ; discharge of pure blood, or of slimy mucus mixed with blood, and of hardened excrement ; frequent urgings to relieve the bowel ; symptoms of belly-ache before, during, and after each action.

Colocynthis comes next in value to the last medicine ; it is more particularly indicated when the belly is distended and the seat of severe colicky pains ; when the motions are slimy and streaked or mixed with blood ; and when the animal is restless and occasionally shivers.

Ipecacuanha may sometimes be serviceable when the evacuations consist chiefly of slimy mucus, with or without admixture with flakes of lymph matter.

Acidum Phosphoricum should be tried after

Mercurius and *Colocynthis* if the discharge of blood continues; and

Arsenicum when the discharge is offensive, and passed almost involuntarily, and when there are great weakness, wasting, and dullness.

DOSES.—10 drops of any of the above medicines for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs. Repeat each dose every one, two or three hours according to the urgency of the symptoms.

Injections of starch gruel are generally of great value in soothing the bowel; they may be thrown up two or three times a day. The food should mainly consist of gruel; and after recovery of soft fodder, &c. For some time, the diet must be very carefully regulated.

9.—ENTERITIS—INFLAMMATION OF THE BOWEL.

IN HORSES.

In this disease, the mucous and muscular coats of the bowel are inflamed, at first and chiefly. It arises from causes similar to those which have been enumerated as giving rise to colic, and also from twists and displacements of a portion of the bowel.

In the majority of cases, enteritis begins slowly with dullness, staring coat, restlessness, loss of appetite, quickened pulse, &c.; sometimes shivering is the first symptom; at other times, colic. The pain, judging from the animal's behaviour, varies in severity. The belly very tender under pressure, and tucked up. Constipation is usually present, unless when the attack is caused by irritant poisoning; then there is diarrhoea, attended with straining. The mucous membranes of the eye and nose are red and highly injected. At a later period of the disease, symptoms of prostration come on. The pulse becomes small and weak, and can hardly be felt or counted; the breathing quick, jerky, and sighing; the skin covered with cold, clammy sweat; the legs and ears as cold as ice; the strength rapidly declines; the muscles all over the body tremble and twitch; and lastly, convulsions come on, and life is soon extinct.

IN OXEN, SHEEP, &c.

In oxen, enteritis is met with either as an occasional casual disease, or, from obscure causes, prevailing more or less widely amongst the cattle of one locality. It begins, as in the horse, with dullness, loss of appetite, &c., followed by hot dry mouth; dry muzzle; tenderness of the belly, which is bloated with gas; quick pulse and

breathing; bowels constipated, or profusely relaxed. The animal is evidently in pain; it moans, grinds its teeth, lies down and gets up, and wanders about in a state of half unconsciousness. Before long, its strength fails; it staggers, falls down, cannot get up, plunges about, and dies.

In sheep, the symptoms are essentially the same.

In pigs, we observe the same dullness and uneasiness, accompanied by grunting and squealing, and usually by constant retching, or vomiting.

IN DOGS.

The symptoms of enteritis are shivering, followed by general febrile excitement, thirst, loss of appetite, panting, dryness of nose, coldness of the legs, scanty urine, redness of the eyes, &c. The countenance expresses great anxiety, the back is arched, the legs drawn under the belly, and the tail firmly drawn over the anus and between the legs. The dog's cries are frequent, short, and sharp; he crawls to, and remains in, a corner in the dark and out of the way; he frequently looks round to his flanks, and before turning back his head gives a groan rather than a howl; he stretches himself out, and seems to be relieved by lying on his stomach on a cold surface. The pain recurs in paroxysms. The heat of the belly, like that of the skin generally,

is increased; the belly is tense and distended, and tender to the touch. In simple colic pressure relieves pain; and when the stomach is involved in the inflammation, as is often the case, there is almost incessant vomiting, and the vomit is frequently mixed with bile. In true enteritis there is obstinate constipation from the first; but, as the mucous coat is likewise sometimes inflamed, the evacuations may be liquid, blackish, and offensive, in character. The pulse is hard and small and frequent. As the disease gets worse, the hind legs become palsied, the mouth and ears cold, the pulse more frequent and almost imperceptible, the breathing laborious and irregular, the legs covered with sweat, and death speedily ensues.

TREATMENT.

Aconite is generally the best remedy to begin with, especially when the animal is feverish and in great suffering.

Belladonna is indicated by fullness of the belly; tenderness on pressure; redness of the eyes and nose; and symptoms of severe pain.

Mercurius is indicated by great thirst; tender belly; watery offensive evacuations with more or less urging and straining; the evacuations also slimy and mixed with blood; prostration of strength; shivering; and perspirations.

Arsenicum is a valuable remedy for anxiety,

restlessness, and rapid loss of strength ; for small weak pulse ; for retching and vomiting ; for looseness of the bowels ; for great chilliness of the ears and legs.

DOSES.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. Repeat each dose every fifteen or twenty minutes according to the severity of the symptoms.

The remarks on "Colic" and "Peritonitis" should be consulted.

When enteritis is the consequence of poisoning with irritants, the treatment consists in administering a chemical antidote suitable to the special poison, and in giving linseed gruel freely. For the symptoms which remain, treat as directed above ; or, as laid down under "Diarrhoea," "Constipation," "Indigestion," &c., according to the indications presented by the animals' condition.

Apply fomentations externally, throw up injections of starch, and give gruel freely.

10.—ENTERITIS WITH EXUDATION.

IN HORSES AND OXEN.

This is a form of enteritis, not unfrequent in these animals, especially the latter, signalized by the discharge of false membrane. The "molten

grease" of the farriers was probably the disease under consideration. The shreds, and ribbons—often many feet long—of false membrane are frequently mistaken for worms. In other respects, the symptoms do not differ materially from those of enteritis as described above; excepting that there is less prostration and fewer deaths—in fact, recovery generally takes place as soon as the membrane is expelled. With respect to TREATMENT consult the remarks on "Enteritis" and "Dysentery."

11.—PERITONITIS

IN HORSES.

Peritonitis is inflammation of the serous membrane which lines the cavity of the abdomen and covers the contained organs. The inflammation may begin at a certain spot, and rapidly spread throughout the whole extent of the membrane, being confined exclusively to the peritoneum from first to last. Those portions of the peritoneum which cover the liver, the stomach, the intestines, &c., are more liable to take on inflammatory action than that portion of it which lines the walls of the abdomen. The peritonitis

is then partial, and is limited to the particular organ which the membrane covers ; and it is the secondary result of inflammation beginning in the proper tissue of that particular organ.

It is caused by exposure to cold and damp, by food or excrement passing through the ruptured stomach or bowels and falling into the cavity of the belly, and especially by stabs, and the wound of castration.

The *acute* form begins with shivering, &c., followed by loss of appetite ; great thirst ; constipation ; scanty urine ; hard, wiry, quick pulse ; laboured breathing ; dilated nostrils ; anxious expression ; and indications of pain. The animal looks round to his flank, paws the ground, crouches, &c., as in colic. The belly is extremely tender to the touch, hot, and tense. Increased quickness and feebleness of pulse, clammy sweats, short breathing, prostration, and unconsciousness usher in death. If the disease has resulted from the operation of gelding, a few days afterwards, the yard and sheath are painful and swollen, and little or no matter flows from the wound. The animal, if in a loose-box, rests his hind-quarters against the manger or wall. The breast and legs also swell. Then he lies down, looks anxiously to his side, and a few hours afterwards expires.

In the *chronic* form the symptoms are more

obscure. The animal is dull, off his feed, uneasy, paws the ground, looks round to his side, walks awkwardly with his hind legs, breathes fast, passes little urine, gets thin and weak, and looks unthrifty in his coat. The belly is tender to the touch, it gradually increases in size, and when percussed yields a feeling of fluctuation, from the presence of fluid. There is now DROPSY OF THE BELLY.

IN DOGS.

Next to the horse, the dog is most frequently affected. The *acute* form is sometimes, but not always, ushered in by shivering and feverishness. The pulse soon becomes hard, frequent, and small, and either strong or feeble; the breathing is catching and panting; the nose and mouth are dry; there is no appetite, but great thirst. The dog frequently cries out or otherwise shows that he is suffering great pain; he is either restless, and constantly walks from one place to another, or lies on his side stretched out at full length. The abdomen is extremely tender to the touch, and tense and tympanitic at first; later it becomes gradually enlarged from effusion of serum. The enlargement due to tympanitic distention gives a clear sound when the part is percussed; that due to serous effusion a dull sound. The bowels are generally confined and the urine scanty. Death

is preceded by cessation of pain, increase of enlargement, increased frequency and feebleness of pulse, clammy sweats, and exhaustion.

The disease may terminate in return to health, or in dropsy of the belly, or in the chronic form.

The *chronic* form may succeed the acute. In dogs, chronic peritonitis is a rather frequent and a primary disease.

The symptoms of this form are, loss of appetite and spirits; variable appetite, sometimes good, sometimes bad; progressive emaciation; tucked up belly, which on examination is found hard and contracted, and marked by two tense longitudinal ridges; occasional whining and disposition to escape from notice; gradual exhaustion and death in some cases; or recovery in a fair proportion. Towards the last ASCITES comes on.

IN OTHER ANIMALS.

Oxen and sheep, as compared with the horse, bear injuries of the belly almost with impunity, and the same remark also applies to other animals. This has been tested by injecting lactic acid into the dog's belly, and by the operation of "spaying" swine, without serious results ensuing as a rule. When it does occur, either as the consequence of wounds, or injuries, or from other causes, the general symptoms are similar to those found in the horse and dog as above detailed.

TREATMENT.

Aconite is indicated at the commencement of the attack, for shivering, scanty urine, restlessness, followed by quick pulse and breathing, and general febrile excitement.

Belladonna is required for tenderness and distension of the belly; quick, short, distressed breathing; and for symptoms of belly-ache.

Bryonia is suitable when there are confined bowels; scanty urine; anxious, hurried breathing; and swelling of the sheath, breast, &c.

Mercurius is indicated for tenderness of the belly to outward pressure; retching and vomiting, &c.

Arsenicum is indicated for all the symptoms which are met with in the last stage; such as, weak and small pulse; great weakness; and also when the pain suddenly subsides, cold sweats break out, and the pulse becomes almost imperceptible—symptoms which are almost invariably the precursors of death. Swelling of the sheath and breast, and scanty urine are additional symptoms.

DOSES.—10 drops for horse and cow; 5 for sheep and pigs; 2 to 5 for dogs. Repeat each dose every two or three hours, according to the violence of the symptoms.

When peritonitis arises from rupture of the stomach or bowel, it cannot but end fatally.

Those cases that follow castration, very often terminate in death within five or six days after the operation. When an abscess forms in the cord, it will be necessary to open it, and to remove a portion of the cord.

Fomentations of water, as hot as can be borne, should be assiduously applied to the abdomen throughout the continuance of the disease. In some cases it may be desirable to use injections.

When fluid accumulates in the belly, the remarks on ascites should be consulted.

12—WOOD EVIL—MOOR ILL.

IN OXEN, &c.

The disease thus named is, rightly or wrongly, described as a dysentery due to local causes. It is found amongst cattle which graze on woodland pastures, moors, peaty and ill-drained lands; and is believed to be caused by eating plants and shoots containing much astringent matter. It is most common in spring and autumn.

This disease begins diminution of all the secretions and excretions—the bowels are costive, the urine scanty, the milk lessened, &c. Cudding is

suspended. Before long, the animal becomes dull, refuses food, drinks eagerly, has a hot and dry mouth, and the pulse and breathing are increased in frequency. The mucous membrane of the eye and nose is injected and yellowish. The urine becomes dark from admixture with blood, and smells strong of ammonia. The fæces are hard and coated with mucus alone or tinged with blood; and become subsequently liquid, offensive, and still more bloody. At the same time, the animal manifests all the ordinary symptoms of colic. If the disease should remain unchecked, the purging increases, the belly becomes distended with gas, rapid wasting follows, and death ensues.

TREATMENT.

The first step is at once to remove the affected cattle to a new pasture. The same treatment should be adopted for this disease as has been recommended for "dysentery."

13.—TWISTS, ETC., OF THE BOWEL.

Various deviations from the natural position of the bowel are discovered in most of the lower animals. Sometimes the bowel is twisted upon itself, or entangled by fibrous bands, or strangu-

lated by tumours with a long stalk winding round the intestine. One of the most common forms is called INTUSSUSCEPTION, where a portion of the bowel is drawn within the canal in the same manner as the finger of a glove may be drawn inwards. The result is the same in all—the bowel is obstructed, no fæces can pass along it, symptoms of colic appear, and the animal dies of inflammation. The dog is the most subject to this last deviation, cattle and sheep less so, and the horse least.

There are no symptoms during life which indicate with certainty the existence of these serious conditions. The animal exhibits the usual indications of suffering violent pain in the belly, such as are described under “colic.” In the great majority of cases, horses sit on their haunches like dogs, and this is held by some to be characteristic.

All such accidents are beyond the reach of medicine. It has been suggested that the belly should be opened and the entanglement unravelled. The suggestion is practically useless, because there are no certain distinctive marks between simple colic and twists. Attempting to cure colic by opening the abdomen would scarcely be good surgery.

14.—HÆMORRHOIDS—PILES.

IN HORSES, OXEN, &c.

Piles are small tumours, consisting of enlarged veins at the end of the rectum. They occur less frequently in the horse than in oxen and sheep. In the latter animals, we observe stiffness in the hind legs and disinclination to move. The fæces are tinged with blood. The secretion of milk is diminished and cudging arrested. An examination makes known the existence of tumours in the bowel. When these tumours burst, congealed blood is discharged. In most cases there are symptoms of feverishness, such as quick pulse, hot mouth, loss of appetite, dry snout, &c.

IN DOGS.

Piles are either internal or external: the former, when seated within the external sphincter of the anus; the latter when found outside that muscle. Both may co-exist in the same animal.

Want of exercise, the use of purgatives, constipation, stimulating food, straining in the act of fæcation, diseases of the liver interrupting the circulation of the blood and producing distension in the hæmorrhoidal veins, are the most frequent causes of piles. The dog's rectum is peculiarly

exposed to disease ; first, because from his natural constipated habit of body he strains forcibly in the act of voiding fæces ; and, secondly, because he swallows many things that are of an indigestible nature, and that for that reason pass into the rectum, and set up local irritation or inflict local injury.

TREATMENT.

Aconite is indicated when the animal is off his feed, restless, and feverish ; when the part is hot and tender to the touch ; and when inflammation arises in the piles, especially if it extend, as is occasionally the case, to a large part of the rectum.

Nux Vomica and *Sulphur*, either singly, or in alternation, are especially indicated when the piles are dependent on constipation.

Mercurius is required when, besides costiveness, there is a discharge of slimy mucus, alone or mixed with blood ; and when, in the dog, ulcers remain after an inflamed pile bursts.

Hepar Sulphuris is of great service when matter is forming.

DOSES.—10 drops of any of the above remedies for horses and oxen, three or four times a-day ; 5 for sheep and pigs ; 2 to 5 for dogs.

The part should be frequently bathed, and kept thoroughly clean, and nothing but soft food should be allowed till the complaint is cured.

15.—ASCITES—DROPSY OF THE BELLY.

Dropsy of the belly results from inflammation of the peritoneum, and from diseases of the liver, spleen, &c. The belly is distended, and it fluctuates when percussed. The legs and sheath are swollen, and pit on pressure. The urine is scanty and the bowels constipated.

TREATMENT.

Ascites unconnected with organic disease is generably curable; but when dependent on diseases of the liver, spleen, heart, &c., it generally ends fatally.

The medicines most likely to be of service are the following :—

Aconitum, when the ascites is of the active kind, with some febrile disturbance and tenderness of the abdomen.

Mercurius, when the ascites is caused by disease of the liver. It is also indicated in active dropsies with febrile symptoms.

Arsenicum, when the ascites follows asthma, or the disappearance of skin disease, or is caused by liver disorders; when the urine is scanty, the debility and wasting considerable, the countenance pinched and anxious, and the legs swollen.

Bryonia is particularly indicated in those acute cases which are brought on by sudden changes of temperature, or by exposure to cold when the body is heated.

Helleborus, *Digitalis*, *Squilla*, and *Cantharis*, are also of service in some cases.

DOSES.—10 drops for horse and cow ; 5 for sheep and pigs ; 2 to 5 for dogs, every four hours.

16.—PROTRUSION OF THE RECTUM.

IN ALL ANIMALS.

The disease which bears this name is not *protrusion of the rectum*, but *eversion of the mucous membrane of the rectum*. During the act of stool it is natural for this membrane to be a little exposed, and when the act is over to be again removed from sight. The same thing occurs to a thickened mucous membrane, perhaps also the seat of piles ; with this difference, however, that the eversion is greater and is not temporary. Under the irritation of piles, worms, drastic purges, attacks of diarrhœa, or of dysentery, &c., the action of the bowel is increased and there is violent straining. The coats of the bowel and the muscular sphincter become lax, and folds of mucous membrane appear externally. But in true *prolapsus*, there is protrusion, not of one coat only,

but of all the coats of the intestine—a comparatively rare accident.

The symptoms are obvious enough.

TREATMENT.

In treating a case of this kind the particular cause must be discovered and removed; for until that be done, the eversion or protrusion will return shortly after the part has been put into its right place. The part should be thoroughly cleansed with douches of cold water for the purpose of removing dirt, and, by astringing its vessels and reducing its size, enabling the operator to return it with greater facility. After having dried the surface, the part should be returned as gently as possible. The difficulty is, not to get it in, but to keep it in. Cold injections are beneficial. The remedies for piles, or for worms, or for diarrhoea—whatever be the cause of the disorder—must be given. In obstinate cases, which do not yield to these measures because of great laxity of tissue, an operation is necessary.

CHAPTER VII.

DISEASES OF THE LIVER, SPLEEN, ETC.

1.—JAUNDICE—THE YELLOWS.

IN HORSES, OXEN, &c.

JAUNDICE occurs in horses as a symptom of inflammation of the liver, and frequently of inflammation of the lungs; in oxen, as a symptom of rinderpest; and in all animals as a symptom of congested and of sluggish liver, as well as of obstruction or pressure acting on the gall-ducts. It is met with in sheep and dogs more frequently than in other domestic animals.

The symptoms of simple jaundice are sufficiently obvious. The mucous membrane of the eye and the skin are tinged with a more or less deep yellow colour. The urine is dark coloured from the presence of bile in it, as may be known by the yellow stain produced on linen moistened

with urine. The fæces are hard, dry, and covered with slimy mucus. The tongue is furred and slimy, and the breath offensive. There is little or no appetite. Wasting of the body and swelling of the legs ensue.

IN DOGS.

The causes, either predisposing or exciting, are not accurately known; but the fatigue of such exertion as sporting dogs have to endure, immersion in cold water, and living in damp places, are amongst the most frequent. Reynal states that he has met with cases of jaundice caused by the grief which the dogs felt on the death of their female companions.

The disease begins with symptoms of nervous irritability, such as timidity, convulsive movements, trembling; these are followed by extreme dullness and dejection. The dog is profoundly apathetic, and takes no notice of the caresses of his master; he is constantly lying down, and gets up only when forced to do so. There is great muscular weakness, and little or no appetite; fluid foods are preferred to solid when the appetite remains to some extent. The pulse is small and very quick, and the respiration quickened and moaning. During sleep, the patient is agitated with starts and slight moans, indicating pain. The skin, especially the internal

surface of the ears, the thighs, the forearms, and of the belly, presents a deep saffron-yellow hue; the right hypochondrium is tender to the touch; the urine is of a notably greenish-yellow colour; the fæces are hard and yellowish; and, after constipation, there is often diarrhoea, the discharges being yellowish, and partially made up of mucus.

Jaundice is frequently met with in conjunction with obstruction of the bowels, from invagination of the intestinal canal.

Sometimes, during the decline of the symptoms of jaundice, there appear a cough, a vesicular eruption, and a discharge from the nose—symptoms which have been observed more especially in young dogs that have not had distemper, or that have had it in a mild form.

TREATMENT.

When there does not appear to be any other disorder present save jaundice, the following remedies usually prove the most serviceable:—

Aconite, at the beginning of such cases as are attended with feverishness—hot skin, dry mouth, thirst, quickened pulse, &c.

Mercurius is indicated when there is pain in the right shoulder, as is shown by lameness of the right leg and tenderness on pressure; by the yellow colour of the eyes and skin; by the slimy evacuations; by loss of appetite, &c.

Chelidonium Majus is useful for distension from wind, dark urine, costive bowels, coated tongue, yellow eyes, whitish fæces, &c.

Doses.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. One dose every three hours.

The treatment of jaundice as a symptom is of course that of the major disease, whatever it may be. Also refer to the following remarks on inflammation of the liver.

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2.—HEPATITIS—INFLAMMATION OF THE LIVER.

IN HORSES.

Inflammation is often mistaken during life for congestion—in fact the two conditions can scarcely be distinguished in the domestic animals. Not only so, but the symptoms of either one or the other are so obscure and ambiguous as often to be misconstrued or overlooked. Both arise chiefly from high feeding, and hence are often found in London dray-horses.

In the *acute* form of the disease, the horse is dull, listless, and unwilling to move; the fæces

are dark and lumpy, sometimes of a lighter colour than usual and a most offensive smell; the urine high-coloured and scanty; the appetite bad. The feverishness may be very slight, or it may run high. The membrane of the eye is yellow; the mouth soapy and foul. Sometimes the pulse is quickened, sometimes remarkably slow. Lameness of the right leg is common, from pain in the shoulder, just as in the human disease; and this lameness is often attributed to a wrong cause, and mis-treated accordingly. In bad cases, the pulse becomes weaker, the breathing quickened, the legs cold, and the animal, weak, sleepy, and staggering, dies ere long. In some cases, dropsy comes on.

In the *chronic* form, the symptoms are of much the same character, only they are slow in their progress. There is pain in the right shoulder, known by flinching on pressure, lameness, and pawing the ground.

Inflammation of the liver ends in recovery or in abscess; or in the chronic form which lays the foundation of incurable enlargement, and softening. In old-standing disorganization of the liver, death often takes place from rupture and internal bleeding. If a fat horse with a low pulse and lame in the right fore-leg is suddenly seized, after severe exertion or even without, with colicky *pains*, anxious expression, cold legs and ears, and

great prostration, it is probable that the liver has been ruptured. Frequent, deep sighing is a characteristic symptom.

IN OXEN, SHEEP, &c.

In other animals, sheep especially, diseases of the liver are more common than in the horse. Abscesses and great alteration of structure have been met with, although nothing very much amiss was observed during life.

The symptoms and results are substantially the same as in the horse.

IN DOGS.

The *acute*, which is the less frequent form, may arise from exposure to cold and damp, from over-feeding, bruises, and other injuries, intense heat, the action of powerful emetics which are so frequently given to dogs, in whom vomiting is a very easy action. Over-feeding and want of exercise acting together are the most frequent predisposing causes of liver diseases in dogs, and hence the prevalence of such complaints amongst petted and fat dogs, especially when they are subjected to unusual exertion.

The symptoms of the acute variety of hepatitis are—restlessness, dullness, loss of appetite and of spirits; acceleration of the pulse, thirst,

tongue coated and protruded from the mouth, craving for water, shivering before accession of fever, and subsequently alternations of heat and cold. After a few hours, or in the course of two or three days, the gums, lips, whites of the eyes, and skin generally, become tinged with a yellow colour, and the urine presents the same hue. The right side is enlarged, and, when touched, flinching and groanings are produced. Vomitings of slimy, bilious matter come on; the appetite gets worse, whilst the thirst continues; the breath becomes offensive; emaciation and debility gradually progress; the bowels are either confined or relaxed; the excrement clay-coloured, from absence of bile; the fever assumes a typhoid character, and the dog at last, unless promptly relieved at an early stage, sinks from exhaustion.

The *chronic* variety may be the sequel of the acute, or it may arise during the course of distemper, in which, however, it partakes more of the sub-acute character; it occurs in cases of chronic and inveterate mange, and other skin diseases. Improper food is the most frequent exciting cause. The dog is dull, sleepy, and disinclined to move himself; the mouth is cold and the tongue furred; for some time past he has been gradually wasting, despite a fair appetite, without apparent cause, until he is now reduced to a skeleton. The coat stares and the hair is detached

in patches. The skin, eyes, and urine are coloured with bile; the fæces clayey. The belly is enlarged, especially on the right side. When this region is examined, a hard, solid, and almost painless swelling is detected; this is the enlarged liver.

TREATMENT.

Aconitum should be given when the fever is high, the skin hot, the tongue furred; and when there are thirst, restlessness, and pain on pressure in the region of the liver.

Mercurius is indicated when the whites of the eyes, and the skin generally, present a yellow colour; when the tongue has a yellowish fur, and the evacuations are knotty, and clay-coloured.

Nux Vomica is suitable against great tenderness on pressure in the hepatic region, vomiting, thirst, high-coloured urine, costiveness.

Arsenicum is especially indicated after the disease has made some progress, and when typhoid symptoms are appearing, such as vomiting; offensive, blackish diarrhoea; cold legs; great prostration; weak, small, irregular pulse. It is also suitable in the chronic form of hepatitis, when the liver is enlarged, the urine scanty, and dropsy of the belly present; or when the disease occurs in connexion with mange, or other skin eruption.

Digitalis is an important remedy against intermittent, and frequent pulse; evacuations dry, and ash-coloured; urine thick and brown; pain in the side, &c.

Podophylin should take the place of mercurius for the same symptoms, when that drug either fails to do good, or has already been given in too large doses.

DOSES.—10 drops for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs.

3.—FLUKES IN THE LIVER—ROT.

IN OXEN AND SHEEP.

The fluke-worm, or *distoma hepaticum*, is found in the liver of sheep much more frequently than in that of oxen, and is associated, in the former animals, with a peculiar condition of the system, which one writer quaintly calls "a direful ruin of the general health and constitution." This so-called fluke disease has proved most destructive to sheep in certain years, notably in 1860.

Rot is most prevalent in low, damp, marshy, flooded pastures, with rank grasses. The eggs of

the perfect worm are found abundantly in the sheep's liver; they pass along the gall-duct into the bowel and thence are discharged. They are washed into pools or brooks by rain, or fall on the grass; in either case, many die, whilst others are hatched. The embryos are eaten by mollusks, and the other inhabitants of pools, and sheep swallow the latter. The immature worm then reaches the liver of its host, where generative organs are developed, and eggs are laid for the next generation. Such is a brief sketch of the changes which these worms are believed to undergo.

The symptoms of rot generally come on gradually. In the former case, the sheep appear dull and listless, and slowly lose flesh and strength. The membrane of the eye and the skin presents a yellow tinge, more or less deep. When patches of wool drop off this colour of the skin is well seen. Both the pulse and breathing are increased in frequency. Quick, short breathing, and slight irritating cough ordinarily attend those cases that have worms (*strongyli*) in the air-passages, as well as flukes in the liver. There is great thirst, and loss of appetite. At a later period, dropsical swellings make their appearance in different parts—in the belly, causing the belly to become swollen and the back stiff, and also about the throat. At this stage purging is a frequent symptom. In

bad cases, the weakness gradually increases, and the animal becomes dull and stupid, and dies before long.

TREATMENT.

In this disease change of diet is of prime importance. All affected animals should be at once removed to a better pasture, and be fed on nourishing food, such as peas, corn, beans, &c. A supply of common salt is also advisable. Purging is hurtful because it increases the already-existing weakness.

The best medicines are *Arsenicum* and *Ferri Sulphas*—giving them simply for a week at a time, or alternately.

Doses.—One grain thrice a day.

4.—SPLENITIS—INFLAMMATION OF THE SPLEEN.

IN DOGS.

Splenitis, or inflammation of the spleen, has been known to occur in dogs, but it is a disease that discovers itself rather after death by structural lesions, than during life by appreciable or

distinctive symptoms. Splenitis generally co-exists with other diseases of the abdominal organs, and its symptoms are, for that reason, blended with, and obscured by, the symptoms which are respectively manifested by the morbid states with which it may be associated.

In speaking of the symptoms of splenitis Youatt says :—"In the cases that I have seen, the earliest indications were frequent vomiting, and the discharge of a yellow frothy mucus. The animal appeared uneasy, there is shivering, the ears are cold, the eyes unnaturally protuberant, the nostrils dilated, the flanks agitated, the respiration accelerated, and the mucous membranes pale."

Blaine merely says :—"We may expect heat, fullness, and tenderness in the region of the spleen, and pain on pressure."

Chronic disease of the spleen, with enlargement of its substance, occasionally brings on ascites.

TREATMENT.

Aconite is required when there is feverishness, pain, vomiting, &c.

China is indicated when the mucous membrane of the mouth is pallid, the appetite impaired, and the strength reduced.

Ferrum is also suitable for the same symptoms.

DOSES.—2 to 5 drops.

Next to nothing is known, during life, of other diseases of the spleen in other animals; but various changes of structure, such as enlargement, softening, rupture, deposits of tubercle, have been met with, after death, in horses, oxen, &c.

5.—SPLENIC APOPLEXY.

IN OXEN AND SHEEP.

This is the current name for a disease, very common amongst ruminants, which consists of congestion and extravasation of blood in the spleen. It would appear to be a pure blood-disease, the spleen being the organ chiefly involved in the local destructive effects.

It principally attacks high-conditioned animals, or others that have been turned from poor into rich pastures. It is also rife where drinking water contains organic impurities, and on badly-drained lands in hot seasons.

Serious and even fatal results arise when pigs and other animals swallow the blood, flesh,

or offal of cows or sheep that have died of this disease.

The disease comes on suddenly and without warning, and often destroys life in a few hours—from three to eighteen, in the majority of cases. At first, the animal appears to be excited and the eye-balls protrude. Presently, it is uneasy and restless, and manifests the usual symptoms attending pain in the belly. The urine and fæces are often tinged or mixed with blood. The back is arched and the animal remains fixed in one position. The breathing is short and quick; the pulse quick, and, in the last stage, weak and imperceptible. Before death the animal falls down, a reddish frothy discharge flows from the nostrils; the muscles twitch; the legs and ears are deadly cold; the teeth are ground; and the animal moans or bellows.

In sheep the symptoms are identical with those just described as occurring in oxen and cows.

TREATMENT.

In order to prevent the disease and to arrest its ravages, it is necessary to change the pasturage and drinking water, and to attend to drainage, &c. In the medical treatment, small success attends any means whatever. Dashing cold water over the body and causing the affected animals to be rapidly moved about are said to be useful.

The best remedies are :—

Ammonium Causticum in the early stage when the balance of the circulation is disturbed and blood begins to stagnate in the spleen.

Dose.—Mix one part of the strong liquor with seven of water—of this mixture give 10 drops every half-hour, or hour, until there is improvement.

Arsenicum is of great service for purging, pains in the bowels, bloody discharges from the mouth, prostration of strength, &c.; but such symptoms almost invariably end in death.

China may be tried, should the case recur, and there be symptoms of enlarged liver.

Doses.—Of the two last medicines, 10 drops, every 4 hours; for sheep, 5 drops.

CHAPTER VIII.

DISEASES OF THE KIDNEYS, BLADDER, ETC.

1.—NEPHRITIS—INFLAMMATION OF THE KIDNEYS.

IN ALL ANIMALS.

NEPHRITIS, is an occasional, and at all times a most dangerous disease in animals. It may be caused by the presence of a stone; by various injuries, such as blows, sprains, &c., on the loins; it may follow chronic diseases of the bladder, and the employment of cantharides and turpentine. Blisters consisting of cantharides are still largely used; they are really unnecessary in the cure of any disease, and are undoubtedly painful. They are also dangerous; for, the animal may use his tongue and swallow some of the blister, and nephritis may be the consequence.

The use of diuretic balls by grooms and others is also a very frequent cause of this disease.

In this disease, the pulse is hard and quick; the breathing hurried; the skin hot and dry; the mouth hot; the bowels costive; the urine very scanty, passed in very small quantity with frequent urging, and sometimes mixed with blood or matter. There is also intense thirst. The attitude and behaviour of the animal is almost characteristic. The hind legs are stiff and kept widely apart, and there is the greatest reluctance to move. When he is compelled to move he does so in a stiffened, constrained manner, and may walk lame. The loins are hot, arched, and very tender, so that pressure causes flinching. At a later stage, in unfavorable cases, the breath and perspiration smell of urine, the animal becomes depressed and sleepy, and ere long falls down, struggles, and dies.

TREATMENT.

Throw up occasionally a glyster of hot water, give plenty of linseed tea or barley for drink, and apply warm fomentations, or a sheep's hot skin to the loins. The best remedies are the following:—

Give *Aconite* in the early stage when the symptoms of fever are marked, such as, hot skin

and mouth; quick pulse and breathing; great thirst; urine scanty, &c.

When, as is occasionally the case, the disease is traceable to bad food, such as mow-burnt hay, kiln-dried oats, &c., give *Nux Vomica*, especially if frequent urging to pass urine be present, in company with indications of colicky pains, looking round to the side, &c.

Camphor may have to be administered as an antidote when the disease arises from spanish-fly, used in a blister or otherwise.

Cantharis is an excellent remedy in cases not due to that drug, when the urine is scanty and discharged in small quantities with urging efforts, and also when it is mixed with blood.*

Arnica may prove useful when the disease has resulted from injuries to the back; and *Rhus Tox.* when from sprains, &c. Both may, in such cases respectively, be applied externally in the form of a lotion.†

Mercurius Corr. is indicated in the advanced stages when the disease has gone on to the formation of matter, or to enlargement.

DOSES. —10 drops for horses and oxen; 5 for sheep and pigs; from 2 to 5 for dogs. Each dose to be repeated every two, three, or four hours, according to the urgency of the symptoms.

* Refer to the remarks on "Hæmaturia."

† See list of external applications.

2.—DIABETES INSIPIDUS—PROFUSE
STALING.

IN HORSES, &c.

Here there is excessive secretion and discharge of urine. It is met with most frequently in horses; comparatively rarely in the other lower animals.

Musty or otherwise damaged oats and hay are very apt to bring on this disorder; and then it is associated with indigestion. In sheep, it has been ascribed to eating certain plants, including *asclæpias vincetoxicum*, *anemone nemorosa*, &c. The use of diuretics, such as nitre may induce it.

The symptoms present no difficulty. The animal eats less than usual, is soon tired, sweats easily, and is weak and dull. The skin is dry and rough. There is intense thirst, and a disposition to lick the wall and to eat all sorts of rubbish. The mouth is dry and clammy, the tongue furred, and the breath offensive. The urine is perfectly clear, or more or less milky looking; it is passed frequently in enormous quantities, and is altered in its chemical composition. The animal rapidly sinks in flesh and strength, and, in rapid cases, attended with very

profuse staling, dies from exhaustion in a few days or weeks; in slow cases, not before a few months.

DIABETES MELLITUS, in which sugar exists in urine, has been occasionally met with in animals, but it is much more rare than the disease above described. Both diseases are as yet but ill understood, and deserve further investigation by the veterinarian. In both the general symptoms are the same.

TREATMENT.

Affected animals must at once be placed on different food and pasture. Good old hay in moderate quantities is the best. Carrots are good. Not much water should be allowed, and to that little, add pease meal, or flour gruel.

The most likely medicines to be of service are :—*Acidum Phosphoricum*, which should be first tried, when the urine is largely increased, and the animal weak and wasted.

Nux Vomica is indicated when, in addition to the symptoms above described, there are those of indigestion.

These two failing, *Baryta Carbonica* and *Iodium* should be administered.

DOSES.—10 drops for horses and oxen; 2 to 5 for dogs. Repeat each dose every two, four, six, or eight hours, according to the severity of the symptoms.

CASE.

The following case illustrates the symptoms and treatment of a common form of this disease :—

On August 16th, 1853, a horse belonging to Mr. John Hewitt, coach proprietor, Manchester, presented the following :

Symptoms.—Pulse 28 and weak; respiration normal; the whole body is very cold, the legs particularly so; the hair rough, unglossy, and staring; the tongue is of a dirty yellowish colour, and some half-masticated food remains in the mouth; the appetite is both impaired and depraved, for the animal manifests a predilection for dirty litter, and refuses to partake of good diet; frequent micturition; urine profuse, clear and limpid; the bowels are constipated and the fæces are enveloped in mucous.

To have 10 drops of *Nux Vomica* 1, thrice daily.

19th.—Skin of the proper temperature and appearance; tongue clean; appetite much improved; fæces and urine natural, both as regards amount and character.

Continue medicine.

20th.—Convalescent. The horse has worked a job of sixteen miles.*

3.—SCANTY URINE.

IN ALL ANIMALS.

In a great number of diseases, the urine is scanty, as a symptom. It is also more or less diminished in hot weather, and when the animal

* Quoted from my "Veterinary Homœopathy Illustrated."

is worked, or much exercised, because then a large quantity of the fluid of the body is carried off by the skin.

It occasionally happens, however, that a horse, for example, suffers from scanty urine and nothing more, attended with some more than usual efforts to relieve himself—a state of things which knowing grooms consider as requiring a “staling ball.”

In such a case as this, instead of giving a drug that may set up an awkward amount of irritation, recourse should be had to *Arsenicum*, or *Bryonia*, three times a-day, until the above symptoms pass off.

Doses.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs.

4.—RETENTION OF URINE.

IN HORSES, OXEN, &c.

Here there is urine in the bladder requiring to be voided ; but either the expulsive power is absent, or the natural channel is obstructed.

Retention arises from a variety of causes, the chief of which are :—Paralysis of the bladder, or spasm of its neck ; stones lying at the neck of the bladder ; enlarged prostate gland ; stones or worms in the canal ; contractions of this canal, &c.

Male animals are more subject to it than females.

The symptoms are :—*First*, Distention of the bladder; a state of things which any experienced person can satisfy himself of, by making the proper examination through the rectum or vagina; in a word, the bladder is found full of urine. *Secondly*, There is pain on pressing over the bladder in the pubic region, and dullness when percussing it. *Thirdly*, The animal lies, and shifts about from one place to another; when made to walk, he does so unwillingly, with back arched and straggling gait. *Fourthly*, There are frequent, strong, straining, distressing efforts to urinate, but inability to do so; these efforts gradually abate as the bladder loses its sensibility. *Fifthly*, Not only is there inability to pass urine—retention of urine—but there is no power to hold it, and the fluid slowly dribbles away—incontinence of urine. This happens only when the resistance to escape at the neck of the bladder is overcome by the pressure of the fluid behind; showing that incontinence is, in the majority of cases, a symptom of retention.

In the horse especially, this condition is apt to be regarded by inexperienced persons, as that of colic, from the circumstance of there being, in colic, diminished secretion of urine. Nevertheless, there are many cases of undoubted colic attended with frequent attempts to urinate, and

the two diseases cannot, as some writers assert, be distinguished merely by that symptom.

IN DOGS.

Retention is rather common in dogs. It may arise from paralysis of the bladder, as when a cleanly pet is locked up in a room and cannot relieve itself without making a mess. When it can do so, it has lost the power, from the bladder having lost its contractile power through being overstretched. Again, this paralysis may be the consequence of disease and injuries of the head, or of the spine; accompanies constitutional debility from any cause, such as distemper; and co-exists with paralysis of the hind legs.

Stones in the bladder, or in the canal for the passage of urine, and enlargement of the prostate gland are known causes of retention in dogs. The bladder, unless relieved may burst, and then the urine flows into the abdomen amongst the bowels and sets up fatal inflammation.

TREATMENT.

The immediate danger is to be overcome by emptying the bladder by means of the catheter—an instrument which can be introduced without much difficulty in the horse and all female animals. In the dog, it is more difficult, and in the ox impossible owing to the curve in the latter's penis.

Whenever the catheter fails, or cannot be employed, the urethra (urine tube) requires to be opened in the perinæum. An operation is also required, especially in the horse, when the obstruction depends on stone.

In other cases, the following remedies are of service :—

Nux Vomica, when the bladder is paralyzed or weak, and when the retention arises from constipated bowels.

Cantharis, when the urine is bloody, and passed with strong straining efforts in small quantities.

Belladonna when the retention appears to arise from spasm of the neck of the bladder.

DOSES.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. A dose every two hours.

Injections of warm water into the rectum are often valuable. Small animals, such as dogs, should have a warm bath, but not too warm, and only for a minute or two.

5.—HÆMATURIA—BLOODY URINE.

IN HORSES, OXEN, &c.

This condition is of frequent occurrence amongst the lower animals. It arises from blows, rains, and any manner of injury involving

the region of the kidney, caused by overloading, jumping, &c. It is a common symptom of stone in the kidney and bladder, of various diseases of these organs and their appendages, and of purpura hæmorrhagica; and frequently follows calving.

In hæmaturia consequent upon strains, injuries, &c., we find pain in the loins when they are pressed upon, some degree of feverishness, and discharge of clotted blood, alone or along with the urine. This form is very apt to recur, especially if the affected animal return to work too soon, or be over-worked.

Another form of hæmaturia is that which prevails extensively in certain districts, affecting all herb-eaters more or less, and said to be produced by eating various hurtful plants and young trees including arnica, aconite, digitalis, genista hispanica, &c. At first, the urine is scanty and reddish; subsequently, bloody and discharged with ardent pain. The pulse is quickened, the appetite lost, the mouth hot, and the coat staring—all symptoms of febrile excitement, attendant upon active congestion of the kidney, which may run on to inflammation and abscess.

A third form is met with in animals pasturing on poor, and badly-drained land, and prevails most in wet seasons. Stall-fed cattle, living on turnips, are very subject to it; it is rarely observed where

rich fodder is provided. It constitutes what is commonly called RED WATER, so often prevailing amongst cows—a disease characterised by debility and poorness of blood. This disorder begins slowly with loss of appetite, staring coat, dullness, tender loins, &c. Then the urine is observed to be higher coloured than usual, and the milk is often tinged red. The animal becomes weak, the breathing quick, the pulse small and feeble, and the legs, ears, and horns cold. Cudding and secretion of milk are suspended. The membrane of the eye is whitish, or, when jaundice co-exists tinged yellow. Generally the bowels are very costive, sometimes relaxed. At a later period, the urine becomes still more strongly coloured red, and may become even black, strength and flesh fast decline, the eyeballs sink in their sockets, and death soon occurs from exhaustion.

TREATMENT.

In the first form, where the bloody urine has resulted from injuries, blows, &c., the animal must be kept at rest, and have cold water injections thrown up the rectum, or cold water poured on the loins. *Arnica* should be administered inwardly, and *Arnica Lotion** applied externally. When it is merely a symptom of stone, or of diseased kidney, &c., the major disease must be treated.

* See list of external applications.

In the second form, the animal must be removed from the injurious pasture and fed on soft food, including linseed tea.

Aconite should be given when there are symptoms of feverishness, such as hot mouth, quick pulse, diminished secretions, &c.

Cantharis when, in addition to there being blood passed alone or mixed with urine, there are forcing efforts to pass it, attended with pain.

Terebintha is sometimes of greater service than the last medicine for the same symptoms.

In the third form, stop turnips and give generous diet, plenty of linseed gruel, &c.

The best remedies are *Cantharis* and *Terebintha*.

Doses.—10 drops for horse and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. Give a dose every three hours.

IN DOGS.

Hæmaturia, in this animal, generally arises from injuries, stone in the kidney or bladder, &c., and is known chiefly by the colour of the urine, and the presence of clots of blood in it. Blood is frequently discharged from the vascular growths which are met with on the prepuce, as the result of neglected disease there. It is possible that this bleeding might be confounded with true hæmaturia, but an examination of the part will easily dissipate any doubt that there may be as to the source of the blood.

On the treatment of this disease Mayhew makes the following satisfactory remarks:—"I (having been unfortunate in these cases where I employed *Acetate of Lead*) adopted small doses of *Cantharides*, and with these, to my surprise, succeeded; for which reason, I have persevered in my homœopathic treatment. The quantity of *Tincture of Cantharides* I employ is three minims to two ounces of water; and, to my wonder, this appears to answer every purpose; the only fault indeed that a general practitioner might find with it being that it did its work too quickly." What a fault!

6.—CYSTITIS—INFLAMMATION OF THE BLADDER.

IN ALL ANIMALS.

Amongst the causes of cystitis may be enumerated; exposure to damp and cold, injuries, extension of inflammation from the kidneys, the irritation produced by a stone, by cantharides, &c.

The symptoms, are frequent pulse, restlessness, and general constitutional disturbance. There is trembling of the hind legs, attended with frequent efforts to void urine, which is either not discharged at all, or passes away drop by drop. After

the evacuation of the urine, the pain subsides for a time. When the animal, during the pain, looks round to his flank, &c., an inexperienced person may think that the case is one of simple colic; but the evident and unmistakable urinary difficulty will make the nature of the case plain. That portion of the belly in which the bladder is situated, is hot, and tender when examined with the fingers. When the bladder is examined through the rectum or vagina much pain is felt. The urine varies in its appearance, being either clear, or mixed with either mucus, sediment, or blood. If the disease go on, other symptoms make their appearance. The bladder, previously so irritable that it contracted with the greatest force on even a few drops of water, now loses its power, and the urine gradually accumulates within it. The muscular wall is in fact paralyzed. When the coats of the bladder are so much stretched that further dilatation is impossible, the neck of the bladder yields and the urine dribbles away involuntarily.

TREATMENT.

When there are quick pulse; frequent desire to urinate, discharge of scanty, bloody, turbid, urine; pain on pressure in the region of the bladder, give *Aconite*.

When the urine is discharged drop by drop

with great force; the pain increased during the act of passing it; the region of the bladder painful and distended, give *Cantharis*.

Nux Vomica is another good remedy for the last-mentioned symptoms, and may be used in the rare event of *Cantharis* failing.

Linseed tea, &c., should be freely administered.

DOSES.—10 drops for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs. Repeat each dose every two or three hours.

7.—CALCULI—STONES.

IN ALL ANIMALS.

Stones met with in the urinary apparatus are named according to the particular part in which they are lodged.

1.—*In the Kidney*.—Stones in one or both kidneys have been found in all animals, the horse and pig in particular. Tenderness of the loins, discharge of blood, and attacks of pain with manifestation of colicky sufferings, are the chief symptoms, but they are not characteristic. Dogs retch and vomit.

2.—*In the Ureter*.—Stones sometimes pass from the kidney into the tube leading to the bladder, but this is rare owing to the horizontal position

of the ureter. In its passage, most severe pain is excited. If it should be arrested in its course, the urine collects in the kidney and seriously injures that organ. This is specially the case in the pig.

3.—*In the Bladder.*—The chief symptoms are:—straddling manner of walking, the hind legs separated, frequent efforts to pass urine, stoppage of urine, bloody urine, dribbling, and detection of the stone by passing the hand into the rectum to examine the bladder—into the vagina in female animals; or by using a “sound,” when this is feasible.

4.—*In the Urethra.*—In male animals, stones frequently lodge in the tube for the passage of urine outwards from the bladder, and, obstructing the flow of urine, set up colicky symptoms. Sheep and rams are especially subject to this.

5.—*In the prepuce, or fore-skin.*—Most common in horses and pigs, and inducing difficulty in urinating.

TREATMENT.

For the attacks of pain attending stone, and for urinary difficulties so often met with from stone, treat as directed under “Colic,” and under individual heads in this chapter. Stone lodged in the bladder and urethra must be removed by operation; otherwise, a radical cure cannot be effected.

8.—DYSURIA—DIFFICULTY IN URINATING.

CASE IN HORSE.

In July, 1851, Mr. Tinsley, of Warrington, consulted me respecting a valuable carriage-horse. The following symptoms were furnished to me. In external appearance the animal is well, and eats and works as usual. He has, however, the greatest difficulty in urinating; places himself in the necessary attitude, and strains frequently and with considerable force, for upwards of an hour—when the urine comes freely and he is at ease; sometimes a few drops are spirted out. *Allopathic drugs have been given wholesale for a long time, without doing the slightest good.*

I prescribed 10 drops of *Aconite* 1st dilution, in the morning, and the same of *Arsenicum*, at night.

At the end of the week I received information that my patient was very much improved, and I was asked for more of the same medicines.

Six weeks later I was informed that owing to the owner's absence, the medicines had not been continued, and the horse was occasionally affected with slight symptoms of the old complaint.

The medicines were again given, and a cure effected in another week.

A few days ago—I now write on September 14th, 1858—Mr. T. told me that his horse had been perfectly well ever since.*

* Quoted from Brit. J. of Hom. for 1858.

CHAPTER IX.

DISEASES OF THE GENERATIVE ORGANS.

1.—ABORTION.

IN THE MARE, COW, &c.

PREMATURE delivery is an occasional accident amongst all female animals, especially cows and sheep. Amongst the causes affecting all may be enumerated ;—Blows, strains, over-exertion, falls, fright in sheep and cows particularly from being worried by a dog ; it occurs during the course of other diseases, such as hove, inflammation of the bowels, &c. ; and it is curious that when one cow aborts in a byre others frequently do so also. Hence a cow threatened with abortion should be kept by herself. Abortion is apt to recur at the same period in after years, and frequently prevails on one farm or in a district rather extensively.

The symptoms are dullness, depression of spirits, loss of appetite and cudding, &c., followed by

hollow flanks, sinking of the swelling caused by the foal, calf, &c., and stoppage of the usual movements of the living creature within, if it be dead. Then the mare, cow, &c., breathes in a laboured manner, is feverish, and moans; a yellowish discharge flows from the passage; more or less violent straining comes on; and the calf, foal, &c., is expelled either dead or alive.

TREATMENT.

In all animals threatened with abortion from injuries of whatsoever kind and however inflicted, give *Arnica*; and if from fright, *Opium*.

At the same time turn the animal into a quiet place, well-aired, and let the diet be light and sloppy. For fat cows reduce the quantity of food, and for lean ones give an increase.

Should death have taken place it may be necessary to extract the foal, calf, &c., without waiting for the natural powers to do so; and, if necessary, the process of delivery may have to be aided by instrumental agency.

Secale Cornutum may be required when abortion has actually occurred, for violent straining, free discharge of blood, weakness, feeble pulse, &c. If the after-birth (cleansing) do not come away of itself within the usual period, give *Pulsatilla*.

When a cow or sheep has aborted one year, *the same accident* may be anticipated next year;

in this case the liability may be removed by *Sabina*, which is likewise indicated before or during the attack, when there is a discharge of bright-coloured blood, with strong straining efforts.

If the calf be born dead, it should be buried, as well as the after-birth, at some distance from the shippon; and all traces of blood, &c., carefully removed.

Doses.—10 drops for mares and cows; 5 for sheep and pigs. Repeat each dose every one or two hours, according to the violence of the symptoms.

2.—FLOODING AFTER DELIVERY.

IN ALL ANIMALS.

In all cases it is usual for some amount of blood to be lost after the young is born, without any injury resulting to the parent animal and without the necessity of arresting the discharge.

When the womb does not contract firmly, as it ought to do, after delivery, a considerable quantity of blood may flow into its cavity and externally. Injuries to the womb or passage inflicted during delivery, particularly when the process has been difficult and when assistance has been required, may give rise to excessive bleeding.

TREATMENT.

In the last-mentioned instances, after the expulsion of the after-birth, the treatment consists, in keeping the animal quiet in a cool, well-ventilated place; in applying a bandage tightly around the belly; in pouring cold water from a height, and throwing injections of cold water up the rectum or vagina; and in giving the medicines recommended for "Abortion"—the remarks on which should be referred to.

3.—RETAINED PLACENTA.*

IN ALL ANIMALS.

Naturally, the womb expels the after-birth by its own contractible power. When this fails and the after-birth does not come away, it is usual, if it be in the womb, to introduce the hand and thus remove it, or, if it be in the vagina (passage from the womb outwards) the same means can be more easily employed. Injections of warm water are sometimes used.

In my experience, two medicines, viz., *Pulsatilla*, or, this failing, *Secale*, render all manual measures unnecessary in the great majority of

* Or the "cleansing" of cows.

cases. I speak with more particular reference to cows. *China* is also of service.

DOSES.—10 drops for mares and cows ; 5 for sheep.

. CASE.—RETAINED PLACENTA—IRRITATIVE FEVER.

March 27th, 1859, I was called to see a cow belonging to Mr. John Greenwood, coach proprietor, Manchester. The cow was bought on the 23rd, from a Yorkshire dealer, had travelled a long distance, and calved on the 26th. This morning she began to ail and a cow leech was fetched to give her an "opening" drench. I found the pulse 110, small and thread-like ; respiration quickened ; no appetite ; the cow was in a drowsy, sleepy state, and although able to rise, did so with some difficulty, and was evidently weak in the back ; there was very little milk and the cow had not cleansed. In my absence, *Aconitum* and *Belladonna* were sent, and I ordered them to be continued. On the 28th the pulse was 98, the breathing more tranquil, the appetite improved, rumination returned, the sleepiness gone, and the placenta discharged. On the 30th the cow was quite well.

4.—METRITIS—INFLAMMATION OF THE WOMB.

IN ALL ANIMALS.

Of all the domestic animals, ewes are the most subject to this disease. It arises in connection with the process of delivery, and when the after-birth is retained. Usually, it comes on in from four to eight days after delivery.

The symptoms begin with feverishness, such as hot mouth, checked secretions, quickened pulse, &c. These are presently followed by straining and discharge of fluid from the womb; this fluid may be brownish, and even black in colour. The loins and abdomen are tender to the touch, and the vagina hot. The bowels are generally constipated. In favourable cases, these symptoms gradually yield to treatment and recovery takes place; in unfavourable, the pulse and breathing increase in frequency, the discharge becomes offensive, and fatal sinking comes on.

TREATMENT.

When the bowels are much constipated, throw up a clyster of hot water, and give a few doses of *Nux Vomica*.

Injections up the passage are most important aids to recovery in this disease, by removing the discharge, which, by accumulating, decomposes and does harm. When the discharge is offensive Condyl's Fluid should be added to the water.

In addition give one or other of the following remedies according to the subjoined indications:—

Aconite for the symptoms of fever, such as hot skin and mouth, quick pulse, &c.

Pulsatilla if there be reason to believe that a portion of the after-birth has been left in the *uterus*.

Orocus is indicated when the discharge is dark coloured.

Arnica is required when the disease follows a difficult labour and assistance has been employed by the hand or instruments.

Doses.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs.

5.—DISCHARGE FROM THE VAGINA.

IN ALL ANIMALS.

An increase of the natural mucus which is secreted in the passage of female animals may arise from several causes, including injuries, relaxation of the mucous membrane, inflammation of the same, from a condition of general ill health, &c. The disorder in such cases would be called **LEUCORRŒA**, or *whites*. A discharge of white, curdy mucus is a common symptom of chronic inflammation of the womb.

Cows are also subject to a disease arising from contact with the bull's instrument in a state of inflammation attended with an irritating discharge. A considerable discharge of matter flows away, and the urine is passed in small quantities and with evident pain. The parts on examina-

tion, are found to be swollen, red, and painful. This disorder has been called GONORRHEA, or *Clap*.

TREATMENT.

The parts must be frequently bathed with luke-warm water and kept perfectly clean. An injection of *Hydrastis** should be thrown up three times a day when the discharge depends on relaxation; one of *Calendula** when there are wounds, or ulceration; and one of *Iodine** if there be much offensive discharge.

In addition, give *Cantharis* when it is evident from the animal's manner and posturing that urine is passed with pain and difficulty; and

Mercurius, when the parts are inflamed and tender, and the discharge thick and mattery.

6.—INFLAMMATION OF THE PREPUCE.

IN BULLS, DOGS, &c.

In this disease the fore-skin is inflamed and gives forth a mattery discharge. The corresponding disease, which is said to excite this, is described under the head of "Discharge from the Vagina"

* See list of local applications.

as it occurs in cows. On examination, the sheath and penis are found red, and swollen, and the fore-skin covered with matter. Great pain attends the act of urinating.

In some cases, the canal is the seat of inflammation, and then the disease would be called "clap."

A similar state of things is met with in dogs. The part is red, painful, and swollen, and the discharge copious and mattery. Small ulcers sometimes may be observed on the mucous membrane—these by joining together form a large ulcerated surface, from which, in bad cases, warty or fungoid growths spring up. In dogs, it is connected with uncleanness, mange, disordered stomach, gross condition, &c.

TREATMENT.

Apply the same lotions and give the same medicines as are directed above for "Discharge from the Vagina."

SORE TEATS.

In cows the teats often become painful and crack into troublesome sores, which discharge matter; the cow cannot be thoroughly milked, and when being milked kicks, and holds back the

milk. If the milk should be allowed to accumulate in the udder, inflammation may arise.

TREATMENT.

This is very simple and effectual. Wash the sores with tepid water, and keep the part thoroughly clean. Then apply *Calendula Lotion** at least four times a-day; and this failing, *Sulphurous Acid Lotion*.* If the teats are so painful as to prevent milking, the milk must be removed by introducing a teat-tube into the teat. By this means the milk will drain off, and the evil effects of its accumulation be prevented. If the udder should become inflamed, consult the remarks on "Garget."

8.—INFLAMMATION OF THE UDDER.

IN COWS, MARES, &c.

This disease, commonly known as "GARGET," arises in cows from injuries, exposure to cold, and from retention of milk; and it is an occasional result of the "mouth and foot disease," when vesicles form on the teats and the milk cannot be thoroughly extracted.†

We find symptoms of feverishness in this disease, such as quick, full pulse—accelerated

* See list of local applications. † Refer to page 63.

breathing—hot mouth and horns—costive bowels, &c. A portion of the udder is tender to the touch, hot, swollen, and hard. At a later period appetite and cudding fail, the previously hard swelling becomes soft, the milk is found to be mixed with matter, or with blood, or both. If care be not taken, the matter has a tendency to burrow deeply into the gland, and the upshot may be that a portion of the udder is rendered permanently useless for the secretion of milk, or troublesome ulcers remain. In favourable cases, some hardening is left, but it disappears before long; in very bad cases, the inflammation is so violent that mortification ensues, and a portion of the udder sloughs off.

Mares may be affected with the same general symptoms after foaling.

IN EWES, SOWS, &c.

Of all animals, however, ewes are the greatest sufferers, especially in connexion with lambing. When a lamb dies, and the ewe is not provided with another lamb, or has not her udder milked, this disease is almost certain to arise. On the other hand, a lamb frequently dies when its dam cannot allow it to suck in consequence of the pain attending garget.

Sows are attacked with the same disease, under similar circumstances from the same causes.

In the bitch, this disease is very prone to become chronic, and the swelling may prove very refractory to treatment.

TREATMENT.

It is of the utmost importance to remove the milk several times a-day, either by the hand, or by using the teat-tube. Fomentations of hot water should be applied at least three times a-day, followed, when the softening of the hard swelling indicates the occurrence of suppuration, by bran poultices. At the proper time the matter should be let out by the lancet.

The best medicines are :—

Aconite in the early stage when the symptoms of febrile excitement, above described, are present.

Belladonna, when the udder or teat is red, painful, hot, and swollen, and the flow of milk arrested.

Hepar Sulphuris, when the matter is forming, with the view of hastening the process and bringing the swelling to “a head.”

Mercurius, when, after the matter is evacuated, some hardening of the tissue remains.

Silicea when troublesome ulcers remain and the surface is too slow in healing.

DOSES.—10 drops for mares and cows ; 5 for ewes and sows ; 2 to 5 for dogs (female). Repeat the dose every two or three hours ; after improvement, every six or eight hours.

CASE OF GARGET, COMPLICATED WITH RHEUMATISM.

On October 13th, 1861, I attended a cow belonging to Messrs. Drewell, Marylebone. She had been suffering from inflammation of the udder, on the right side, and was doing well under *Aconite*, until this morning when she was found hanging her head and unable to turn round. Her pulse was 84 and jerking; breathing quickened; head hung down; countenance dejected; could hardly move her hind legs; stiff and tender in the back; hocks slightly swollen; the udder hard, painful, hot, and enlarged; no cudding, no milk, and no appetite. To have *Belladonna* and *Bryonia*, in 10 drop doses, every two hours alternately.

15th.—Pulse 64 and without jerking; breathing not so quick; is now cudding and not so stiff; milk and appetite increased; udder better. Con. med. every four hours.

20th.—Since last date, she has steadily improved and is now well.

Besides the foregoing diseases of the generative organs, there are others of more rare occurrence, incidental especially to the canine race, which the limits of this work compel me to omit. They will be found treated at length in my work on "Diseases of Dogs."

CHAPTER X.

DISEASES OF THE RESPIRATORY ORGANS.*

1.—BLEEDING FROM THE NOSE.

This accident may happen to all animals, but is of most frequent occurrence in the ox, and next, in the horse. Usually it must be regarded not so much as a disease but rather as a symptom of different diseases, including glanders, ulceration in the nose, polypus, purpura hæmorrhagica and other blood diseases, &c. It may likewise arise from injuries, over-exertion, &c. The symptoms are sufficiently obvious. The blood is bright coloured, except in certain blood-diseases when it is dark coloured.

In horses severely galloped in hunting blood may issue from the mouth also; and if it be in large quantity death may be instantaneous.

* Including the nose, nasal chambers, windpipe, air-tubes, lungs, pleura, &c.

TREATMENT.

Where nose-bleed is symptomatic of disease, the latter must be treated; but in all cases when the bleeding is excessive it demands exclusive attention for the time. Slight bleeding requires no treatment—it generally stops of its own accord. When this does not take place treat in the following manner:—

Aconite is required when the bleeding attacks a horse in high condition, as the result of over-exertion, and when the pulse is full and quick, the breathing laboured, the membrane of the eye injected, &c.

Arnica is more suitable when the bleeding is the result of local injury. The injection of *Arnica Lotion** may be resorted to, in addition, in bad cases.

Pouring cold water on the head from a height may be advantageously employed.

The use of tight collars, by impeding the return of blood from the head along the jugular veins, may predispose to, and even excite bleeding from the nose. Of course, such a collar should be discarded.

For the treatment of bleeding from the nose dependent upon glanders, ulcers, purpura, the reader should refer to the observations on this disease in other parts of this work.

* See list of local applications.

2—NASAL CATARRH—CORYZA.

IN HORSES.

This disease consists of inflammation of the nose, as well as of the maxillary and frontal sinuses, which communicate with the nose.

It arises from exposure to variations of temperature and to damp and cold, and from bad ventilation, foul, damp stables, &c. It begins with sneezing, some feverishness, swollen eyelids, red eyes, &c.; these are presently followed by a thin discharge which irritates the part over which it flows. Subsequently, the discharge becomes thick and mattery. The feverishness now begins to decline, the quantity of discharge decreases, the appetite returns, and health is speedily re-established. In bad, neglected, ill-treated cases, however, especially in a weakly horse, the symptoms take on the character of nasal gleet. Many cases are accompanied by sore throat, cough, and pain and difficulty in swallowing, from the inflammation extending to the throat.

IN DOGS.

Dogs are very liable to coryza, from exposure to cold. The symptoms do not differ materially *for those of the horse*. Bronchitis, and inflamma-

tion of the lungs are apt to supervene. Distemper usually begins with symptoms of cold in the head.

IN OXEN, SHEEP, &c.

In young oxen and cows, coryza is sometimes met with of a very severe form. It begins with the ordinary symptoms of nasal catarrh; the discharge, however, is bloody, mattery, and offensive. The nasal membrane in the last stage sloughs off; the horns and hoofs also drop off. There is great prostration throughout, and convulsions very generally come on immediately before death. This disease has been termed MALIGNANT CORYZA and also *ox glanders*.

In the pig, the general symptoms are identical with those of the same disease in other animals.

TREATMENT.

Place the animal in a clean, well-ventilated box, clothe him warmly, and feed him on mashes for a few days. In order to have the nose cleaned out, cause him to breathe the fumes of vinegar by pouring some of the fluid on a red hot brick placed in front of his head on a shovel. This will make him snort and sneeze, whereby a large quantity of matter will be expelled. The fumigation should be used at least night and morning so long as the discharge is copious.

The best remedies are :—

Aconite for dryness, stuffing, and redness of the nose; quickened pulse and breathing; hot and dry mouth; thirst and loss of appetite—the symptoms, in short, which denote the febrile state.

Belladonna for swollen eyelids, red eyes, sore throat, pain in swallowing, and flow of tears.

Mercurius for sneezing, free flux from nose, coughing, and sore throat.

Arsenicum, especially if the discharge should continue in spite of the preceding treatment and the disease threaten to lapse into nasal gleet; it is especially indicated when the horse is weak and off his feed; when the attack follows exposure to wet and cold, &c.

DOSES—10 drops for horse and oxen; 5 for sheep and pig; 2 to 5 for dog. One dose every two or three hours.

CASE OF CATARRH IN PONY.

On June 20, 1861, I was requested to visit a pony, the property of His Grace the Duke of Northumberland. This pony was brought from the country to remain for the London season. In a few days it commenced to cough; was off its food, and had difficulty in swallowing; had muco-purulent discharge from the nose; pulse 60, and rather feeble; respiration 16 per minute; nasal membrane vascular; coughed when the throat was pinched; costive, and the fæces thickly coated with mucus; urine scanty, and rather highly coloured.

Treatment.—To have *Belladonna* and *Mercurius v.* alternately every three hours.

21st.—Slight amendment. Continue medicine.

23rd.—Pulse 46, and otherwise improved. Continue medicine every four hours.

25th.—Further improvement. Continue medicine.

27th.—Well.

3.—NASAL GLEET.

IN HORSES.

All chronic discharges from the nose are spoken of together under this one name, or as constituting *chronic nasal catarrh*. The term, however, if used correctly should be limited to those cases in which the mucous membrane lining the nose and its communicating chambers and windings, is in a state of chronic inflammation, attended with discharge of mucus, or of muco-pus. Nasal gleet, in this sense, is usually the result of the acute form already described.

The discharge consists of mucus, or a mixture of mucus and matter; it is whitish, yellowish, or greenish; it varies much in quantity and is constantly flowing, although increased by sneezing and snorting; it is of a uniform consistence,

sometimes partially clotted and lumpy; and it may issue from one, or from both nostrils. The membrane of the nose presents an unhealthy leaden colour. The gland under one or both jaws is slightly enlarged, it may be tender to the touch. In addition, the coat is staring, the appetite poor, and the strength more or less reduced.

TREATMENT.

On this point, I cannot do better than quote the account of two cases first published in my "Practical Reply to Sir B. Brodie's Letter :"—

CASE I.

On 14th of October, 1861, admitted a bay carriage-horse, the property of — Hamper, Esq., of Wandsworth. *This horse has been under allopathic treatment for two months, and daily getting worse. The veterinary surgeon recommended him to be killed as incurable.*

Symptoms.—Copious discharge from both nostrils, adhering like glue; the whole of the nasal mucous membrane vascular; sub-maxillary glands enlarged; rough, harsh, unhealthy coat; low in condition and feeble; bowels costive; urine high coloured; pulse 44, and feeble, bad appetite, &c.

Treatment.—To have *Hydras. C.* 10 drops, 1st dilution, three times a-day, and the nostrils to be fumigated with a solution of the same drug.

15th.—The discharge from the nostrils not so copious, and the membrane not so vascular; pulse 40, *and strong*; appetite better. Continue medicine.

16th.—No discharge from left nostril; slight watery discharge from right; pulse normal; nasal membrane nearly of its natural colour. Continue medicine.

18th.—The watery discharge from nose quite ceased; gave four coughs this morning; to all appearance quite well; no fumigations for two days.

19th.—Cured.

The Turkish bath also was given.

CASE II.

On the 6th June, 1861, a bay carriage-horse, the property of the Right Hon. Lord Wharnccliffe, was sent to me, having a discharge from both nostrils. This horse has been under allopathic treatment for a considerable length of time without the slightest benefit, and it was feared the disease would soon terminate in *glanders*, and my advice was sought.

Symptoms.—Pulse and respiration normal; no cough; copious discharge—muco-purulent—from the nose, which adheres to the *alæ nasi*; the membrane of the nose is highly vascular; the sub-maxillary glands are enlarged, and tender to the touch; the animal is rather low in flesh and not in a thriving state; appetite pretty good; *fæces* and urine normal; the hair is dry and harsh when felt, and the skin adherent.

Treatment.—To have *Merc. v.*, 10 drops, sixth dilution, three times a-day.

10th.—Greatly improved in every respect. Continue medicine.

20th.—Since last report he has had the medicine as before, and is now quite well.

CASE III.

A horse belonging to A. Birley, Esq., Didsbury, near Manchester. This horse is 16 years old, 15 hands 3 inches high, used for carriage purposes, and although delicate when young, has had good health during the last 10 years.

October 14th, 1859.—Present state:—Pulse and respiration slightly quickened; discharge of thick yellow matter from right nostril; accumulation of greenish pus on the nasal alæ; horrible fœtor; the box being ill ventilated, the stench is intolerable and sickening; the right submaxillary gland is swollen and tender; appetite good.

Admitted to the Hospital on the 17th.

Treatment.—*Kali Bichrom.* 1, 10 drops night and morning; the nostrils to be fumigated with the same drug. The discharge began to decrease from the fourth day, and the horse was discharged cured on Nov. 22nd.

4.—COLLECTIONS OF PUS IN THE NOSE.

IN HORSES.

In horses, after catarrh, matter is apt to accumulate in the frontal and nasal sinuses.

There is, in addition to discharge of matter from the nostrils, swelling of the glands under the jaw, and dull sound when the bone of the face over these sinuses is struck with the knuckle. *When only one side is affected, the difference*

between the hollow sound of the healthy side and the dull sound of the diseased one, is sufficiently marked to decide as to the exact locality of the collection. In some cases, *that* side of the face is also swollen, from the upward pressure of the imprisoned matter beneath.

TREATMENT.

Here it is imperative to remove a circular piece of bone by means of the trephine, and to remove the matter by thoroughly syringing out the cavities with warm water. Then, three times a-day inject *Hydrastis Lotion*,* and give 10 drops of *Hydrastis* three times a-day. *Mercurius*, *Kali Bichromicum*, and *Arsenicum* are of service in such cases, in the same doses.

5.—COLLECTION OF MATTER IN GUTTURAL POUCHES.

IN HORSES.

In cases of catarrh where the disease has extended backwards, as well as in strangles, the guttural pouches are often involved in the inflammation, and the result may be that pus collects. When both sides are affected the enlargement

* See list of local applications.

may be so considerable as to interfere with breathing and threaten suffocation. The discharge may escape into the throat, or make its way through the skin at the angle of the jaw. When it flows into the nose, we find the discharge issuing from one side when the horse holds his head down, as whilst grazing, because this position enables the matter to flow out of the pouch. Usually, the discharge does not escape regularly from day to day; it is much increased during work, and by the dependent position. The swelling may cause roughness of breathing, or roaring, and, when large, causes the neck to be thick.

TREATMENT.

In chronic cases of this kind, turning the animal out to grass—in other words, compelling him to keep his head for a considerable time in a position calculated to allow the matter to escape—is often a successful measure. In others, an operation is necessary.

6.—NASAL DISCHARGES IN DOG.

These may depend:—

1. On a relaxed state of the nasal mucous membrane, following an attack of neglected or *badly-treated* catarrh, and accompanied by secre-

tion of vitiated mucus, especially if the constitutional powers be impaired by chronic disease or by old age.

2. On the natural mucus of the nose collecting and putrefying.

3. On the irritation and consequent excessive secretion induced by the presence of a foreign body in the nose, or by a morbid growth, such as a polypus.

4. On inflammation and consecutive ulceration of the mucous membrane, occurring either spontaneously, or as the result of catarrh or of injuries.

5. On the caries of the nasal bones.

TREATMENT.

Arsenicum.—2 to 5 drops of the first dilution twice a-day, followed, if necessary, in a fortnight by

Mercurius Iod., 1 grain of the second trituration every night; or by

Aurum Muriatricum, if the dog has been already saturated with mercury, and if there be disease of the bones. Give 1 drop of the first dilution night and morning.

The nose should be thoroughly syringed with lukewarm water night and morning.

7.—GENERAL REMARKS ON NASAL DISCHARGES.

IN HORSES, &c.

In the preceding pages of this chapter it has been shown that discharge from the nose is one of the most prominent symptoms of coryza, of nasal gleet, and of disease of the nasal sinuses, and guttural pouches.

It is, in addition, observed under the following circumstances :—

1. When, as is stated at page 41, a diseased tooth sets up irritation and inflammation in the upper jaw, the result being the formation of matter which finds its way into the nose, and thence is discharged through the nostril. The discharge is confined to one side, is very offensive, and sometimes bloody.

2. When the bones entering into the formation of the nose (nasal, turbinated, upper jaw, &c.) are diseased, in consequence of the intrusion of foreign bodies. In disease of the turbinated bones, accompanied by collection of pus, the face swells, and there is obvious deformity.

3. In glanders. This disease will be found fully discussed in another part of this work. *Many of the diseased conditions already described*

have, from the nose-symptoms, been mistaken for glanders, and many valuable animals have been destroyed in consequence. In a doubtful case, inoculate an ass with the nasal discharge; if glanders follow, all doubt is removed.

GENERAL TREATMENT.

This comprises the removal of diseased teeth, foreign bodies, and rotten bone. Collections of matter *must* be removed, either by injections into the nose, or by irritating fumigations to compel sneezing, or by position, or by operation.

In diseases of the nose such as I have already described, I consider *Hydrastis Canadensis*, injected in solution, or inhaled by steaming, one of the very best local applications that can be used.

For internal use, I place, in the order of their value, *Kali Bichromicum*, *Hydrastis*, *Mercurius*, and *Arsenicum*. All others are comparatively worthless.

DOSES.—10 drops for horses and cows; 5 for sheep and pigs; 2 to 5 for dog.

8.—NASAL POLYPUS.

This growth is sometimes met with in the dog's nose. It may or may not protrude externally, and when small, or situated high up, may be cut.

of sight altogether. The nose is obstructed, and the ingress and egress of air more or less impeded.

The polypus must be removed by ligature or other surgical means.

In other animals, nasal polypus is comparatively rare. The above remarks apply to them all. In the horse, nasal polypus has been known to cause roaring.

9.—PARASITES IN NOSE.

IN DOGS.

Pentastomum Tenioides.—This worm occupies that part of the respiratory tube which lies anterior to the larynx, and specially inhabits the nasal sinuses, &c. Obstruction more or less marked is the consequence of its presence in this region.

Chobart first discovered it in the frontal sinus of the horse and the dog. He confounded it with the *tænia*, and christened it the *tænia lancéolé*. Blanchard examined many dogs without finding it, and states that the helminthological collection at the Jardin des Plantes contains only two specimens. It has been found in dogs in different parts of the Continent, and also in other animals. Leuckart introduced the *Pentastomum Denticulatum* of the rabbit into

the nostrils of a dog, where he afterwards found the *Pent. Tenioides*. He concludes that the former, which lives encysted in the viscera of several species of animals, is the larval form of the latter. He states that mature ripe eggs are thrown off from this parasite and discharged with the nasal mucus of its host in the act of sneezing. These embryonic forms manage somehow or other to get introduced into the bodies of other animals, where they become fully developed. Fürstenberg has found the immature or asexual form in the mesenteric glands of the sheep, as developed from the eggs of this parasite, which are swallowed by the sheep with its food. When a dog or a wolf eats the entrails and mesenteric glands of such sheep, the embryonic parasite sticks to the nose and lips, and afterwards passes up the nostrils, where it becomes firmly fixed by its hooks. Here the embryo gradually increases in size, is endowed with sexual organs in about two months, and attains its full development in twelve. Colin introduced fifty immature parasites into a Newfoundland dog. Eight months afterwards the dog was killed, and eleven mature parasites, nine males and two females, were found in the ethmoidal cells and about the turbinated bones. The males moved about; the females were fixed by their hooklets to the pituitary membrane, and had their copulative sacs filled.

with spermatozoa, and their oviducts crammed with eggs.

As to the symptoms produced by the worm, whilst Rudolphi found a dog which he examined perfectly well, and Dujardin, Miram, Colin, &c., make no reference to any disorder in their cases; on the other hand, Chobart gives rather a dark account of the effects produced. The animal, he says, is subject to convulsions, during which it is violently agitated, stops short, hits itself on the head, rolls over, rubs its nose on the ground, and the jaws are convulsively champed. It devours everything within reach, such as wood, straw, &c., discharges a large quantity of saliva, passes urine involuntarily, and sneezes without ceasing. Death sometimes ensues.

The mucous membrane of the nose is found to be red, blackish, ecchymosed, thickened, and ulcerated; the sinuses more or less filled with pus; and even the ethmoid bone sometimes partially rotten.

IN SHEEP.

Bracy Clark, in his memoir on Bots, states that the eggs of the sheep bot are deposited on the margin of the nostril. He proceeds—"The moment the fly touches this part of the sheep, they shake their heads and strike the ground violently *with their fore-feet*, at the same time running

away and holding their noses close to the ground, and looking around them on every side to see if the fly pursues, and as they go along they often smell also to the grass and look anxiously into it, lest one should be lying in wait for them; if they observe one, they gallop back again, or take some other direction."

The larvæ are found in the maxillary and frontal sinuses. When fully developed they drop out through the nostrils, remain on the ground for about two months in the pupa state, and then take to wing.

TREATMENT.

For the parasites in the nose of the dog and sheep, nothing can be done except to cause these animals to breathe the fumes of burning *Sulphur*, or *Tobacco*.

10.—INFLUENZA.

IN HORSES.

This disease is more definitely called CATARRHAL FEVER, and EPIZOOTIC CATARRH. When pure, uncomplicated, and typical it consists of two factors—a general fever, and a specific affection of the mucous membrane of the nose, eyes, mouth, throat, and air-passages.

It is supposed to arise from some peculiar atmospheric condition—nobody knows what; it prevails extensively in certain years, striking a certain number of animals at one and the same time; it is most common in spring and autumn, and affects young horses more frequently than old.

The likeness between it and human influenza is singularly close. In an ordinary case of the genuine disease, the first symptoms are those of febrile excitement. The animal is dull, listless, off his feed. The pulse is quickened and feeble, the breathing slightly hurried, the urine scanty and high-coloured, the bowels costive, the skin of variable temperature, the mouth dry and hot, the membrane of the nose and eyes reddened. At this period, there is a congestive swelling and dryness of the mucous membrane of the nose, frontal sinuses, and eye—a condition which subsequently extends along the air tract. Presently, the affected membrane gives forth a secretion, which is at first thin and irritating, afterwards thicker, tougher, and mattery. At this period, the eyelids are swollen and tears flow down the face; and there is a discharge from the nose, attended with sneezing, and also from the mouth. In addition, we find indications of sore throat, pain and difficulty of swallowing, quidding of food, external swelling of the throat at the angle of *the jaws* and in the space under and between the

jaw bones, frequent irritating cough, and greater acceleration of the breathing. It is a peculiarity of influenza that throughout its whole course the nervous system is profoundly affected; as witness, the early depression of spirits, languor, muscular weakness, want of energy, disinclination to move, staggering gait, halting and dragging of the hind legs, and stupor, or (in some cases) a tendency to excitement.

In a few days, more or less, these symptoms begin to subside and finally disappear, leaving the patient however weak and out of condition for a little while longer, according to the mildness or severity of the prevailing epizootic.

In practice, influenza is not often found thus typically well-marked and clearly defined as a catarrhal fever. The attacks of one year differ much from those of another, and even at the same period individual cases present great diversity of symptoms. For instance, in one case the fever may be of a somewhat decidedly inflammatory character; in another, it may be low and malignant. The fever may predominate over the catarrh, or the catarrh over the fever. Again, serious complications in contiguous, continuous, or distant organs may arise during the course of influenza, without the latter ever losing its specific features. I may instance inflammation of the lungs, pleura, heart, &c.; and more particularly

disease of the digestive mucous membrane. These different phenomena of a concrete disease have been classed by Hering and other continental writers into three groups, somewhat arbitrary to be sure, but yet sufficiently inclusive as to be free from grave objections: they are, 1st. The catarrho-rheumatic; 2nd. The gastro-erysipelatiuous, where there are the swellings of œdema; and 3rd. The gastric, or bilious-rheumatic.

In this country, the different varieties of influenza that have occurred within historical times, may practically be arranged into two grand classes; 1st. That whose symptoms are above narrated, in which the respiratory mucous membrane, and respiratory organs secondarily, are the chief local seats of inflammation; and 2nd. That in which these organs are less affected than the mucous membrane of the digestive canal, and the digestive organs.

In this last variety, the catarrhal symptoms referrible to the nose, eyes, throat, and lungs, are but slightly marked—the force of the disease is spent elsewhere. We observe loss of appetite; thirst; symptoms that may, without stretching a point unduly, be interpreted as indicating headache and nausea; coated tongue and accumulation of soapy saliva in the mouth; a yellow colour of the membrane of the eye, nose, and mouth, and *like-wise of the skin*; slimy evacuations. In some

years, as in the spring of 1865, these symptoms have been especially prominent. In some cases the eyelids were everted, the legs much swollen. Symptoms of headache—resting the head on the manger, or hanging it low down almost to the ground. There were often rheumatic pains in the legs, known by the animal being lame.

TREATMENT.

The patient should be placed in a clean, airy, well-ventilated, loose box, be sufficiently clad, and fed on oatmeal and linseed gruels, and bran mashies.

The most useful medicines are the following :—

Aconite is seldom required at the onset except in those comparatively rare instances of the disease when the attendant fever is of a decidedly inflammatory character. It may, however, be called for during the progress of the disease when local congestions and inflammations arise.

Belladonna is indicated by swollen, closed eyes; flow of tears; sore throat; pain and difficulty in swallowing; tenderness and swelling of the glands about the neck and jaw; irritating cough; indications of headache or of delirium.

Ammonium Causticum is a valuable remedy for the complication of congested lungs, which may be known by hurried, laboured breathing, dilated nostrils, cold skin, &c.

Mercurius is indicated by similar catarrhal

symptoms as those which demand *Belladonna*, and in some cases these two medicines may be used in turn with great benefit. *Mercurius* is likewise valuable for foul tongue; discharge of saliva; offensive breath; yellowness of the eyes, mouth, and skin; slimy, bilious evacuations.

Nux Vomica is peculiarly called for when the bowels are constipated, or relaxed at one time and confined at another; the evacuations hard, lumpy, and covered with mucus; tendency to drowsiness and apparent paralysis of the hind legs.

Phosphorus is required when inflammation of lung is at hand or present, which may be known by the symptoms detailed in this chapter on that disease.

Bryonia must be given when any rheumatic, or pleuritic element exists—short, grunting breathing; pain to the touch in the intercostal spaces; friction sounds heard on applying the ear to the affected side, &c.

Arsenicum is required for great prostration of strength and spirits; feeble pulse; and in short for the obvious low symptoms which characterize the worst variety of this disease—that in which the power of life are profoundly and rapidly depressed.

DOSE.—10 drops of any of the above medicines; repeat each dose every one, two, three, or four hours according to the necessities of each case, and the resulting improvement.

11.—STRANGLES.

IN HORSES.

Strangles is the common name for a disease compounded of fever, and a specific phlegmonous inflammation of the arcolar tissue about the throat, and of the glands under the jaw.

It is most common between the fourth and fifth year; in cold, damp springs and autumns; and attacks almost every horse.

It begins with loss of appetite, languor, occasional cough, feverishness, staring coat, &c., followed by sore throat, pain in swallowing, and swelling and tenderness about the throat externally. This swelling is at first hard, then it softens, and breaks, unless opened by the lancet, and discharges matter. Usually, the disease now abates, and recovery is rapid. Sometimes, however, abscesses appear in other parts of the body—the back, shoulders, legs, breast, &c. This is **IRREGULAR STRANGLES**. Inflammation of the windpipe, or of the lungs, sometimes follows strangles.

TREATMENT.

Foment the throat three times a-day, and afterwards put on a hot bran poultice.

As a rule, the only medicines required in simple

strangles are *Belladonna* and *Mercurius*, 10-drop doses, every four hours, turn about. In order to hasten suppuration, *Hepar Sulphuris*, is useful, given in the same doses and time. *Arsenicum* may be necessary when strength and appetite are not quickly recovered.

12.—CONGESTION OF THE LUNGS.

IN HORSES, &c.

The sudden and severe engorgement of the lungs with blood so often met with in horses, and less frequently in dogs, is most frequently caused by a long run in hunting, or by any other severe and long-continued exertion. It also arises when a horse has been over-fatigued by a hard day's work, especially if he has been exposed to damp and cold. Under such circumstances this disease is very common amongst the horses of our large brewers, and railway and carrying companies. By the adoption of a more rational system of treatment than that of bleeding, blistering, and so on, many hundreds of pounds would be annually saved.

The symptoms are beyond mistake. The patient's pulse is strong and full, and may count *up to 100* per minute. The heart, on placing

the ear to the side, is heard beating with unnatural agitation. The breathing is oppressed, laboured, panting, and may count 50 or 60. The nostrils are widely dilated and work heavily. The eyes are staring, and anxiety and distress are written in the expression of the countenance. Sometimes blood flows from the nose in small quantity, or, if a vessel be ruptured, fatal bleeding may take place suddenly. The legs and ears are cold. These symptoms may end in death, or they may run on to the development of pneumonia, or bronchitis, or pleuro-pneumonia.

TREATMENT.

In simple congestion of the lungs, I find the best remedy to be *Ammonium Causticum*. The following is a case in point:—

On September 19th, 1857, I was requested to visit a valuable entire horse, the property of Mr. Walter Carter, of Manchester. He has recently come into the owner's possession, has been put to severe work, to which he has hitherto been unaccustomed, and on the 18th, was permitted to drink copiously of cold water, whilst perspiring and exhausted, after a hard day's labour. Shortly afterwards he had a rigor so violent that his legs tottered under him. Three hours after this shivering I found the following symptoms:—Pulse strong, full, and 100 per minute; respiration laboured, heaving, and 84 per minute; conjunctiva injected; eyes watery; mouth hot, and clammy to the touch; corrugations of the cutaneous muscle along the side and shoulder; general surface warm, the

extremities cold ; the nasal membrane preternaturally vascular, &c.

To have 10 drops of *Ammon. Caust.* 1, in a wine-glassful of water every hour.

On the following morning the pulse counted 28 in the minute, and intermitted occasionally ; all the other symptoms had disappeared, and he ate, drank, dunged, and staled as if nothing had been amiss. At two o'clock of the same day the pulse had risen to the healthy standard, and had assumed the usual character ;—in short, the horse was all right, and resumed work next morning.

13.—BRONCHITIS—INFLAMMATION OF THE BRONCHIAL TUBES.

IN HORSES.

This is a very common disease, in its acute form, amongst all domestic animals, especially the horse and dog. It may come on and run its course without any preceding or accompanying disorder ; very often it succeeds sore throat, catarrh, and congestion of the lungs. In a considerable proportion of cases, there is more than pure bronchitis—a touch of pure pneumonia, constituting BRONCHO-PNEUMONIA.

Bronchitis arises from exposure to east winds, *damp* and cold, changes of the weather, &c.

The symptoms first observed, in sudden and uncomplicated bronchitis, are languor, loss of appetite, thirst, ears and legs cold, pulse full and quick, and breathing accelerated. The cough is at first slight, and afterwards frequent and painful. The in-taking act of breathing is attended with noise from the diameter of the tubes being diminished by a swollen condition of the mucous membrane lining them. This sound is heard best at the front of the chest, and also on applying the ears to the side. At a subsequent period, an increase of mucus secretion takes place, at first frothy, afterwards thick and mattery; it both runs from the nose and is coughed up. At this time, loud rattling can be heard in the chest on applying the ear to the side. The symptoms now begin to decline and recovery soon takes place.

IN OTHER ANIMALS.

All our domestic animals, equally with the horse, suffer from bronchitis. The causes and symptoms are the same as those above described.

Dogs are particularly subject to CHRONIC BRONCHITIS, which may be known by habitual cough, shortness of breath, rattling in the chest, and copious discharge of phlegm by coughing—symptoms which are aggravated by exposure to *damp and cold*.

TREATMENT.

Aconite should be given for hot, dry mouth; quick, full pulse; thirst, and the other symptoms of feverishness.

Bryonia is indicated for quick, difficult breathing; rattling in the windpipe and in the air-tubes in the lungs; frequent, dry, irritating cough; discharge of thick phlegm.

In the majority of cases, at the beginning, it will be necessary to give these two medicines alternately.

Belladonna is required for soreness of the throat; pain and difficulty of swallowing; violent fits of coughing, &c.

Antimonium Tartaricum is indicated when the discharge of mucus is very copious; the cough loose; the rattling loud; and the breathing much distressed.

Kali Bichromicum is indicated when the phlegm is tough, sticky, and stringy; in old-standing cases; and when the tongue is covered with yellow fur.

Sulphur I generally give when all the violent symptoms are on the decline, with a view to hasten recovery.

DOSES.—10 drops for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs. Give each dose every one, two, or three hours, according to the violence of the symptoms.

CASE OF ACUTE BRONCHITIS.

On March 5th, 1867, a horse belonging to Messrs. Mowlem, Burt, and Freeman, had the following symptoms:—Pulse 104 and soft; respiration 48 and laboured; eyes and nose red; loud rattling in air-tubes; no appetite; faeces lumpy and coated with mucus. To have *Acon.* and *Bryonia*, 10 drops, every hour for five hours, then every two hours. On the 6th—pulse 66; respiration 36; eats a little; rattling not so loud; continue medicines. On the 7th—pulse 60; respiration 25; frequent cough and discharge of mucus; rattling much less; looks better generally; continue medicines. On the 9th—pulse 48; respiration 14; in other respects doing well; continue medicines. On the 11th—well; to have 10 drops of *Sulphur* night and morning for two or three days.

CASE OF CHRONIC BRONCHITIS.*

On the 25th of December, 1860, I visited a horse, the property of Messrs. Sewell. He was ill three months ago under allopathic treatment, and has had a copious discharge from the nose ever since.

Symptoms.—Violent rattling in the bronchial tubes; copious discharge of frothy mucus from both nostrils; pulse 48 and full; respiration 16 per minute; frequent moist cough.

Treatment.—To have *Ant. Tart.* 10/2, night and morning.

This treatment was continued for eight days, when the horse was quite well. Ten months have now elapsed, and the horse has been at work ever since, with the exception of a few days when he was laid up from a severe injury.

* Quoted from my "Practical Reply to Sir B. Brodie's Letter."

CASE OF BRONCHITIS IN DOG.

January 30th, 1861.—A dog belonging to Lady Seymour was affected thus :—quick pulse ; loud and constant wheezing ; frequent cough ; rattling in bronchial tubes ; occasional vomiting ; no appetite. The dog had 4 drops of *Aconite* every hour for three doses, and then one dose every three hours.

31st.—Better. *Aconite* and *Bryonia*, alternately, every three hours.

February 2nd.—Quite well.

14.—PNEUMONIA—INFLAMMATION OF
THE LUNGS.

IN HORSES.

Inflammation of the proper substance of the lungs is rare in comparison with a compound disease in which the air-tubes, or the pleura covering the lung is more or less inflamed at the same time. When the air-tubes and lungs are inflamed, we call the disease BRONCHO-PNEUMONIA, and we find the joint symptoms of the two distinct diseases more or less mixed up together in the same case. When the pleura and lungs are affected, the disease is called PLEURO-PNEUMONIA, *which presents the combined symptoms of the*

two individual affections. Nor is it rare to find symptoms of bronchitis, of pneumonia, of pleurisy, and even of heart disease, co-existing in the same patient.

Fat, full-blooded animals, and those that are over-worked or severely galloped are predisposed to this disease, and exposure to cold and damp and to variations of temperature determine the attack.

In some cases, the disease begins with a more or less violent fit of shivering, the ears and legs being cold, the skin staring, the nose pale, and the animal languid and depressed. In others, slight cold, want of appetite, cough, &c., are first observed. In either case, febrile reaction comes on; the pulse is frequent and full, counting 60 or 70 in the minute; the breathing is short, laboured, and 30 or 40 per minute, or even much higher; the membranes of the nose and eyes are reddened; the mouth hot and dry; the expression of the countenance anxious and distressed; the bowels costive, and the urine scanty and high coloured.

At a somewhat later period, the breathing becomes more laboured and heaving at the flanks; the nostrils are widened and in full play; the neck is stretched out at full length; the nose and head poked forward; the animal stands fixed in one place, with his legs separated from each other—in a word, he instinctively postures himself in

such a manner as to bring the "extraordinary muscles" of respiration into full action. At the same time, the membranes of the nose, eyes, and lips have a dark bluish tinge; the legs and ears are remarkably cold, whilst the skin elsewhere may be moderately warm; patches of sweat break out here and there; the cough is only occasionally heard, or it is frequent, hard, painful, and attended with the discharge of reddish-coloured mucus.

Still later, the pulse is small, weak, and can hardly be counted; the breathing is still more laboured and difficult; the expired air hotter than usual; the mouth cold and clammy; the teeth are ground; the muscles twitch and quiver; the eyes are dim, heavy, and glassy; the animal very weak and drowsy; he wanders unconsciously around the box, or leans against the manger; he soon staggers and falls down; and whilst attempting without success to get up again he groans, struggles briefly, and dies.

The *physical signs* leave no doubt as to the nature, severity, extent, and complications of the disease; and give valuable information as to the probability of recovery. One or both lungs may be involved. In the diseased parts of the lungs, a sound is heard resembling that which is produced when one's hair is rubbed between the finger and thumb, close to the ear. This sound is

learnedly called "crepitation;" it denotes the first stage of pneumonia, when the lungs are engorged with blood or bloody serum. In the same parts the natural healthy sound is obscured, and as the disease advances, displaced by the morbid one. As compared with the healthy lung, the diseased part gives out a dull sound when tapped, as is done when the human chest is "sounded." In the second stage, the lung loses its spongy structure, and becomes dense and solid. Neither crepitation nor the natural sound can now be heard, but instead, a blowing sound proceeding from the larger bronchial tubes which are surrounded by the solid lung. At a still more advanced stage, the sounds are rattling, from the passage to and fro of air through the effused fluids or products of inflammation. These either cease, and are gradually replaced by the gentle breezy murmur of health, or continue, and then indicate suppuration of the lung.

IN DOGS, &c.

The dog and pig are very liable to inflammation of the lungs. In the former animal, the symptoms are well marked and characteristic. After general shivering, succeeded by partial sweats, the breathing becomes quick and heaving, the expired air being hot, and the pulse strong, full, and increased in frequency. The

head is extended, the tongue protruded, and the dog remains obstinately in one fixed position, sitting on his hocks, or if reluctantly moved, again assuming that posture,—all indicating oppressed lungs, and urgent need of free respiration. There may be some restlessness, the dog wandering about and perhaps lying down for a minute or so, but as a rule, the position is on the hocks,—a circumstance which is alone almost diagnostic. There is a short, quick cough, generally, but not invariably, accompanied by slight discharge of reddish-coloured mucus. Unless the symptoms are relieved, the dog gradually gets worse and worse, the breathing more and more difficult and embarrassed, the dog poking his nose through any crevice to get plenty of fresh air, to relieve the feeling of suffocation which it doubtless suffers; the pulse becomes weaker and quicker; the body thinner and weaker. Yet the dog sits hour after hour, with brooding head, closed eyes, and half-unconscious manner, until, at length, worn out and exhausted, he dies.

IN OXEN AND SHEEP.

In these animals, pure pneumonia is rarer than in others. When it does occur, the generic symptoms are analagous to those observed in the horse and dog as above detailed.

TREATMENT.

Place the animal in a well-ventilated box, and let plenty of air in. In the horse, put on warm clothing; hand-rub and bandage the legs; and give small quantities frequently of whatever food he will eat.

The following are the best remedies:—

Ammonium Causticum in those cases which begin with languor; coldness of the legs, ears, and nose; rough, staring coat; quickened, difficult breathing; pulse small, weak, and frequent.

Aconite is indicated when febrile reaction comes on—the pulse being quickened and full; the breathing laboured and panting; the mouth hot and dry; the membranes of the eye and nose injected.

Bryonia is especially required, often in alternation with *Aconite*, when there are symptoms of bronchitis, such as loud rattling from the first in the air-tube, heard when the ear is applied to the breast or side; the cough loose and attended with discharge of frothy phlegm, &c.

Phosphorus is of the greatest value in this disease, especially in the second stage when the lung is solidified—a condition which can be ascertained by detecting special physical signs. Also, when the breathing is very laboured and distressed; and when a reddish or yellowish discharge is coughed up.

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Arsenicum is often of service in extreme cases, when there are: great depression; weak pulse; cold clammy mouth; purging; no appetite.

Sulphur I always give as soon as the acute symptoms have yielded.

Doses.—10 drops for horses and oxen; 5 for sheep and pigs; 2 to 5 for dogs. Give a dose every one, two, or three hours, according to the violence of the symptoms.

The following case, quoted from my "Practical Reply to Sir B. Brodie's Letter," illustrates the symptoms and treatment of an ordinary case of pneumonia in the horse:—

On the 13th August, 1860, a horse, the property of the Midland Railway Company, was brought to my establishment, having been observed to be unwell for two days previously. The ostler, unfortunately, gave a dose of aloes, which, however, did not purge; but it affected the kidneys and nervous system, for the horse was weak in his back, and swayed from side to side, and the left hind leg was partially paralysed. These effects I have frequently seen when aloes has been given, and especially after the use of Cupiss's balls.

Symptoms.—Pulse 72 per minute; respiration 36 per minute; copious crepitation throughout the whole of the left lung, particularly in the upper portion, or the site of the saddle; no friction sound anywhere; frequent, short, hard, and suppressed cough, belly tucked up, and marked with deep indentations along the margin of the ribs; the conjunctival and nasal membranes vascular; nostrils expanded; urine scanty,

and high coloured; appetite bad; the animal dull, and hangs his head.

To have *Aconite*, 10 drops, first dilution, every three hours, in a wine-glassful of water.

14th.—Pulse 64 per minute; otherwise the same. Continue *Aconite* as before.

15th.—Pulse 56, and respiration 21 per minute; appetite improved; the animal is more lively; the rattles in the inferior and middle third of lung nearly gone; copious still in upper third.

To have *Phosphorus*, 10 drops, third dilution, every three hours.

16th.—Considerable amendment; pulse 56, and the respiration 16 per minute; is lively, and appetite good; rattles nearly gone, except a few along site of saddle; does not cough so much; conjunctival and nasal membranes less injected; laid down last night,—horses never lie down while they are ill with inflamed lungs, and it is always a good sign of returning health when they do so,—otherwise improving. Continue the medicine as before.

17th.—Improving; pulse 46, and respiration 12 per minute; the rattles are nearly gone.

To have *Sulphur*, 10 drops, sixth dilution, night and morning.

19th.—Pulse 42, and respiration 10 per minute; was put into the yard to water, and began to play. Continue medicine.

20th.—Well.

15.—PLEURISY—INFLAMMATION OF THE PLEURA.

IN HORSES.

This disease, which consists of inflammation of the serous membrane lining the cavity of the chest and covering the lungs, attacks the horse more frequently than any other animal. As I have already stated it often co-exists with pneumonia. Exposure to cold, and injuries of the chest, broken ribs, &c., are the most frequent causes.

It usually begins with shivering, followed by dry mouth, languor, anxious expression, &c. The pulse is quickened, hard, and wiry. The respiration is characteristic, the chest being comparatively still, whilst the muscles of the abdomen are in full play, and whereas the act of expelling air from the lungs is easy and prolonged, that of inspiring air is short and constrained. The cough is short, hacking, and greatly increases the pain in the side, or "stitch" which the horse feels. The horse stands still in one position in a crouching attitude, with neck stretched out and his head protruded; he seems uneasy and in pain, and afraid to move. On applying pressure to *the affected side*, he flinches and grunts. The

ear placed on the side hears a rubbing friction sound. The skin over the inflamed chest is thrown into folds, and the flanks are tucked up; the skin around the openings of the nostrils and around the mouth is wrinkled. When effusion of serous fluid occupies the cavity of the chest—HYDROTHORAX—the breathing becomes more laboured and quicker, but less grunting; the pulse feebler; the friction sound diminishes, or ceases; dullness on percussion is detected at the lowest part of the chest; and, in unfavourable cases, drowsiness, prostration of strength, and cold sweats usher in death.

In a large proportion of cases, the membrane covering the heart, and in a few, even the heart itself, is involved in inflammation at the same time as the pleura.

IN DOGS.

The symptoms begin with shivering, followed by febrile excitement; quick breathing, inspiration being short and suppressed, expiration full; short, dry cough; pulse small and hard; the sides are tender when pinched or tapped; the dog sits up; the secretions are scanty and the appetite impaired. In the early stage, rubbing friction sounds can be heard on listening at the affected side.

The disease terminates either in return to

health, or in dropsy of the chest. In the former case, the pleura may or may not become adherent to the inner surface of the ribs; in the latter, fluid accumulates in the sac of the pleura, compressing the yielding lung, interfering with its function, and displacing adjacent viscera. Diminution of pain, respiration becoming less frequent and less constrained, and the pulse getting lower, indicate return to health; whereas, when death is at hand, the breathing becomes more and more difficult and suffocative, the pulse weaker and quicker, and a watery swelling, which pits on pressure, appears on the lower part of the chest, belly, scrotum, and legs.

IN OXEN, SHEEP, &c.

These animals, and likewise the hog, may be attacked with pleurisy, from the same causes as the horse, the most frequent being one out of the many circumstances summed up in the expression, "exposure to cold."

The symptoms, especially the peculiar character of the breathing, are identical with those of the same disease in the horse and dog.

TREATMENT.

Aconite is required in the early stage, when the pulse is hard and full, the breathing quickened, the mouth hot and dry, &c.

Bryonia is required, in alternation with the last medicine, when the breathing is short and catching; the sides painful to the touch; the cough short and restrained; and when the animal grunts when the side is pressed against.

Sulphur is useful when all the severe symptoms are on the decline.

DOSES.—10 drops for horses and oxen; 5 for sheep and pig; 2 to 5 for dog.

For the treatment of Dropsy of the Chest, so apt to supervene upon pleurisy, refer to the remarks on that subject. Also consult the observations upon "Pneumonia," and "Bronchitis."

The two following cases are illustrations of pleurisy as it occurs in the horse:—

CASE I.

On May 12th, 1862, Mitchell Henry, Esq., of Harley street, requested my attendance on one of his carriage-horses. It was in the breaker's hands, and was supposed to be suffering from sore throat, for which mustard was applied. I found the following symptoms in chief:—pulse 60; respiration 36 and short; a grunt at every expiration; intense pain in the side when pressure was applied; friction sounds; frequent suppressed cough; membranes of eyes and nose injected. To have *Aconite* every 3 hours. On the 13th—pulse 48; respiration 24. On the 14th—pulse 44; respiration 16; side less painful; in other respects better. To have *Aconite* and *Bryonia* alternately. On the 17th—the animal was convalescent—to have *Sulphur* night and morning for a few days.

CASE II.

On Nov. 20th, 1861, I attended a horse belonging to Dr. Davison. It had been hard worked in rough, stormy weather. The symptoms were:—pulse 40; peculiar jerking action of the heart, felt at the left side and heard; pain on pressure between the ribs on the right side, causing grunting; single, suppressed, dry cough, which evidently causes pain; animal very feeble when made to walk. To have 10 drops of *Bryonia* 1, every three hours. On the 21st, much the same, only the side not so painful. To have *Digitalis* alternately with *Bryonia* every two hours. On the 22nd, much better; pulse 32; heart not so jerking; appetite better; no cough and no pain in side. Continue medicines night and morning. On the 25th, well.

Still further to illustrate different forms of lung diseases, as well as their treatment, I cannot do better than reprint the following cases from the British Journal of Homœopathy, for 1858:—

CASE I.—PNEUMONIA (DOUBLE) AND PLEURISY.

On November 15th, 1859, I visited a splendid carriage-horse belonging to Thomas Brocklehurst, Esq., The Fence, Macclesfield. This horse is 4 years old, 16 hands high, and was bought in the metropolis a few weeks ago. He has been quite well until a few days since, when, after ordinary carriage work, he was observed to cough, and to be otherwise out of sorts. The coachman thinking that it was a case of simple sore throat, gave a few doses of *Belladonna* and *Hepar Sulph.*; but as he continued to get worse, I was summoned by telegram. Two or three doses of *Aconite* were given before my arrival.

I found the following symptoms :—Pulse 64, soft, and compressible ; respiration 36, and slightly embarrassed ; cough frequent, hard, and single ; conjunctiva injected and yellowish ; nasal membrane also increased in vascularity ; mouth hot and slimy ; appetite bad ; pain and grunting on intercostal pressure ; nether lip pendulous ; distinct crepitation in superior half of left lung ; some mucus rales in the middle ; loud friction sound along the middle and infero-posterior portion of right lung, with crepitation higher up, &c.

Treatment.—To have *Aconite* and *Bryonia* 1, 10 drops every three hours alternately.

16th.—Much the same. To have *Phosphorus* and *Bryonia* 1, 10 drops every two hours alternately.

17th.—Pulse 70 ; respiration 30 ; grunting and catching during respiratory acts ; suppressed, short cough ; has eaten mashes and some hay ; left lung sounds rather better ; those of right unaltered ; mucous membranes less injected.

Continue medicines.

18th.—Pulse 58 ; respiration 24 ; occasional grunts ; the head is held higher ; the fæces are soft ; the urine less turbid ; the appetite improved ; the horse is more lively ; bronchial respiration along middle of right lung, with small crepitation above and below ; cough still frequent.

Continue same medicines every three hours alternately.

19th.—Pulse 46 ; respiration 18 ; only a few sub-crepitant rales here and there in left lung ; instead of the tubular breathing of yesterday, there is now the returning crepitation of health, mingled with the respiratory murmur ; healthy sound in other parts of this (right) lung ; friction gone ; cough loose ; some

stringy expectoration; has been resting several times yesterday and to-day. Continue medicines every four hours.

21st.—Pulse 37; respiration 14; limited rales here and there in both lungs, especially in superior part of left; in all other parts the respiratory murmur is re-established; much improved in all other respects.

Continue medicines.

23rd.—Pulse 32; respiration 14; all abnormal sounds are gone; appetite good.

To have *Sulphur* 6, 10 drops thrice daily.

26th.—All right.

CASE II.—PLEURO-PNEUMONIA IN HORSE.

On January 20th, 1858, Messrs. Syddall Brothers, calico printers, Chadkirk, near Manchester, requested my attendance on their mare, which had been coughing for several days previously.

Her symptoms are these:—Pulse full, strong, and 70 per minute; breathing laboured, difficult, and 40; cold legs, nose, and ears; frequent, short cough; no appetite; crepitation through whole of left lung.

To have 10 drops of *Aconite* 1, every three hours.

On the 21st, the pulse is down to 58, and the breathing to 36 per minute; the appetite is better; in all other respects improved.

To have *Aconite* 1, and *Phosphorus* 3, in 10-drop doses, every three hours alternately.

On the 22nd, the pulse is 44, and the breathing 12 per minute; all the crepitation is gone; the appetite is good; has laid down.

Continue same medicine every six hours.

On the 24th, she is much the same.

To have 10 drops of *Arsenicum* 1, every six hours.

On the 26th, she is much worse, in consequence of having been most injudiciously walked out this morning from a warm stable into a frosty and piercing cold air. The pleura is now inflamed, the symptoms being short, suppressed cough; pain in the intercostal spaces; grunting, &c.; no friction can be detected.

To have 10 drops of *Aconite* and of *Bryonia*, each of the 1st dilution, every three hours alternately.

On the 28th, the pulse is 48 and weak; breathing less frequent and not so difficult and painful; looks lively, appetite good.

To have *Arsenicum* and *Phosphorus*, 10 drops of the 1st dilution, every three hours alternately.

On the 30th, all abnormal sounds in lungs gone; eats well; rests as in health, &c.

To have *Arsenicum* as before, three times a-day.

February 1st.—Well.

CASE III.—TYPHOID PNEUMONIA.

On February 23rd, 1860, Messrs. W——, the extensive London carriers, placed an aged mare under my treatment. *She has been treated allopathically for seven or eight weeks, and is pronounced incurable.* On this date the symptoms are:—Pulse 73, weak and small; respiration 36, quick and short; the cough is painful, cavernous, and frequent; discharge from both nostrils is copious, muco-purulent, and brownish; considerable expectoration from the mouth; the breath, sputum, and nasal discharge are horribly fetid.

especially after a paroxysm of coughing; when the animal coughs, the head is held down to the ground, and the flanks heave; the eyes are dull and heavy; the appetite greatly impaired; the urine scanty; the bowels costive and the evacuations offensive; the extremities are cold; the mare is exceedingly weak and in very low condition. On examining the lungs, I found tubular breathing in inferior third of left side, loud rattles in middle third, and subcrepitation in upper third; there were some scanty, indistinct rattles throughout right lung.

Treatment.—To have 10 drops of *Phosphorus* 1, three times a-day.

24th.—Pulse 60; respiration 24; has eaten more to-day than she has done since the disease began. Continue medicine.

25th.—Appetite still improving; the hair is more glossy; returning crepitation in hepatized portion of left lung; respiratory murmur returning in inferior portion. Continue medicine.

27th.—Pulse 52 and stronger; eyes brighter; cough less frequent; profuse muco-purulent expectoration; odour of breath less offensive; healthy breathing gradually returning in both lungs. Continue medicine.

March 3rd.—Steady general improvement since last report; still a few rattles in inferior portion of left lung. To have *Sulphur* 6, 10 drops three times a-day.

10th.—Went to work with the team.

Remarks.—A more satisfactory case than this it is impossible to cite; a more conclusive proof of the efficacy of *Phosphorus* in advanced stages of Pneumonia it is impossible to furnish. I have frequently opened horses that have died under allopathic treat-

ment of this disease, with exactly the same symptoms as in the above case, and have always found one or more abscesses in the lungs.

CASE IV.—PLEURO-PNEUMONIA.

On April 7th, 1852, a cart-horse belonging to Messrs. Molyneux, Webb, and Co., the eminent glass manufacturers of Manchester, stood, for a considerable time, exposed to rain and cold, and was shortly afterwards observed to be unwell.

There are the following symptoms:—Pulse full, hard, and 68 per minute; breathing 32 per minute; short, suppressed inspiration; long, slow expiration, attended with a wheezing grunt and catching during breathing; pain when the intercostal spaces are pressed against, with elicitation of characteristic grunting sound; the skin over the affected side is thrown into folds, in consequence of contraction of the cutaneous muscle; the skin about the sides of the nostrils, and at the angles of the mouth is also wrinkled; the tongue is covered with a yellow fur; the bowels are constipated; there is a frequent, short, suppressed cough, evidently attended with pain; bronchial rattles are distinctly audible in the inferior third of the right lung, whilst in the middle third, small crepitation can be detected.

To have *Aconite* and *Bryonia* of the 1st dilution, 10 drops of each every two hours alternately.

On the 8th.—The pulse is 64, and the respiration 24 per minute; no abnormal sounds in the right lung, but in the middle portion of the left there is copious crepitation, and friction sounds, which latter are more marked when the animal coughs.

To have three doses of *Bryonia* 1, at intervals of

two hours; and then the same dose of *Phosphorus* 3, every three hours.

On the 9th.—The pulse is 52, and the respiration 26 per minute; the cough is less frequent and less constrained; the friction sounds are gone; the crepitation is less marked; the appetite is improved; the dung and urine are natural; the horse looks more lively.

Continue the *Phosphorus* as before.

On the 10th.—The pulse is 48, and the respiration 22 per minute; better in all other respects; healthy vesicular breathing is resumed in the inferior half of the lung; scanty crepitation in posterior portion of superior half.

To have 10 drops of tincture of *Sulphur*, every four hours.

On the 12th.—The pulse is 44 and the breathing 16 per minute; all abnormal sounds have disappeared; improving otherwise.

Continue same medicine.

On the 14th.—Considerable amendment. A few more doses of *Sulphur* will restore my patient.

CASE V.—BRONCHO-PNEUMONIA IN HORSE.

On May 6th, 1852, a horse belonging to Mr. McCaldon, horse dealer, of Manchester, presented the following symptoms:—Pulse soft, full, and 60 per minute; breathing difficult, 80 per minute and attended with loud mucous rattles at the bifurcation of the trachea; violent shivering; frequent, loose cough; anxious countenance; ears, legs, nose, &c., very cold; *pituitary* membrane dry, and of a bluish colour; con-

junctiva intensely vascular ; throughout the whole of both lungs there are loud bronchial mucous rattles, which mask every other sound.

To have 2 drops of *Ammonium Causticum*, every hour.

On examination three hours afterwards, the pulse is full and counts 100 per minute ; the breathing 68, and attended with less audible rattles ; the entire surface burns with heat.

To have 5 drops of tincture of *Aconite*, every hour.

On the morning of the 7th, the pulse is 60, and the breathing 46 per minute ; there are fewer rattles in the larger bronchi heard at the breast.

To have 10 drops of *Aconite* 1, every four hours.

In the evening of the same day, the pulse is 60 and very weak, the breathing 24 and much less difficult ; there is great debility and no appetite.

To have three doses, 10 drops each, of *Arsenicum* 1, at intervals of two hours ; then resume the former medicine.

From the 8th to the 10th.—The *Aconite* has been continued in the same way. The pulse and respiration are becoming more natural, and the general appearance indicates recovery.

On the 11th.—The pulse is risen to 49, and the horse is altogether worse. On examining the lungs, which I had not done since the first day, in consequence of the favourable progress of the case, I found, along the inferior third of the left lung, dullness on percussion, absence of respiratory murmur, bronchial respiration, and considerable crepitation around the consolidated lung. The last sound is also distinct along the scapular region, and in the site of the saddle.

To have 10 drops of *Arsenicum* 1, every four hours.

On the 12th.—He is found lying—the first time since his illness; pulse 42; respiration 13; crepitation but slight; appetite much improved.

On the 13th.—The pulse is 44; the breathing 12; there is a peculiar sharp, but not strong jerk of the heart at every contraction; all the crepitation has disappeared, and the respiratory murmur has returned; so also has it in the lately hepatized lower third of left lung, where it is mingled, here and there, with loud crepitation; the horse eats and drinks freely, and looks lively. In all other respects there is decided improvement. Continue medicine.

In the evening of the same day, there is no great change manifest, except that at every beat of the heart there is a peculiar sound, similar to what may be produced by striking a piece of tin with a sharp pointed rod of iron.

To have 10 drops of *Digitalis* 1, every four hours.

On the 14th.—The ringing sound is gone; the pulse 33 and of its ordinary character; breathing 11 per minute; no abnormal sounds in lungs; in all other respects well.

To have two more doses of *Digitalis*, and then discharge the patient cured.

16.—ABSCESS.

As a result of pneumonia, a collection of matter is not uncommon. If a bronchical tube opens *into the abscess*, the matter, which is of a very

offensive, stinking character, is coughed up more or less abundantly, and loud gurgling sounds are heard in it on listening at the chest.

Some horses recover; whilst others linger on never pick up flesh, won't eat, and die.

CASE.

In the spring of 1867, I treated a case of this kind in a horse belonging to Messrs. Mowlem, Burt, and Freeman, contractors. The attack was one of severe inflammation of the lungs. An abscess formed and burst into a bronchial tube, whereupon the breath became foul and offensive matter was coughed up. The animal was convalescent in 30 days. The chief medicines given were *Aconite*, *Bryonia*, and *Phosphorus* in the early stage, and *Ammonium Causticum* and *Hepar Sulphuris* in the later. I also used, after the abscess broke, a steam fumigation medicated with *Baptisia*.

17.—BLEEDING FROM THE LUNGS.

Rupture of a blood-vessel in the lungs, and discharge of blood by the nose and mouth, is an occasional occurrence in the horse, almost always as the result of severe and long-continued exertion; more rarely from heart disease. A horse severely run with hounds may be fatally attacked in this manner.

CASE.

On October 2nd, 1863, a horse belonging to Mr. Jay, contractor, immediately after strongly exerting himself in pulling a cart out of a clayey place, was suddenly seized with coughing and brought up a quantity of florid blood, and some ran out of his nose likewise. He continued his work up to the 6th, when he was again seized in the same way. I saw him next day. His pulse was 72 and soft; his countenance was anxious and dejected; his breathing somewhat hurried; loud rattling could be heard in the windpipe and large bronchical tubes; he shivered; and after coughing, blood was discharged. Five days afterwards, nothing ailed him. The medicines he had were *Hamamelis* and *Bryonia*, in 10-drop doses every three hours.

In such cases, *Aconite* and *Arnica* are useful.

18.—HYDROTHORAX—DROPSY OF THE CHEST.

IN ALL ANIMALS.

A collection of fluid in the cavity of the chest is a not unfrequent sequel of pleurisy. When this disease is treated by bleeding and other lowering measures, dropsy of the chest is almost unavoidable, especially if the horse has been in low condition previously.

There are cases without previous pleurisy, where from poverty of blood and general weak-

ness, fluid collects in the chest, in the sheath, at the breast, in the legs, &c.

The symptoms are as follows :—All the acute symptoms of pleurisy have declined and to all appearances the case is doing well. But on applying your ear to the affected side you discover that above a certain point you can hear the sound of healthy breathing, and below no sound at all. The higher the fluid rises the more difficult becomes the breathing; the pulse is weak; the appetite lost; swelling appears under the skin at the sheath, breast, belly, legs, &c., and unless relief be afforded, symptoms of exhaustion set in, followed by death.

TREATMENT.

Very frequently these cases do well; the fluid is absorbed and complete recovery takes place.

The best medicines are :—

Arsenicum when the breathing is difficult; the pulse weak; the appetite gone; the urine scanty; and the breast, legs, &c., swollen.

Digitalis when there are indications of heart disease; pulse feeble and irregular, &c.

Mercurius when the breathing is much oppressed; the nostrils dilated, the cough short and frequent.

Ferrum is of value in those cases which occur in debilitated subjects, and after bleeding.

China may prove useful under similar circumstances.

DOSES.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. Repeat each dose every two or three hours.

Tapping the chest and evacuating the fluid has been resorted to in the horse with some success.

19.—ROARING, ETC.

IN HORSES.

When the air-passages from the nose downwards are obstructed, and the free entrance and exit of air impeded, various sounds are caused, differing in pitch and sonorousness ; hence, a horse affected in this manner is called a *Roarer*, *Piper*, *Whistler*, *Blower*, *Grunter*, *Trumpeter*, &c., according to the character of the sound produced.

Roaring may arise from deformity of the nose, and from bony growths, polypus, and other tumours encroaching on the nasal passages ; from tumours in the throat and upper part of the windpipe ; from wasting of the muscles of the larynx on one side ; from injuries to, and deformities and contractions of the windpipe.

Many of these conditions are left as the result

of previous disease, such as sore throat, catarrh, laryngitis, &c. They all constitute unsoundness. Tight-reining is a common cause of roaring by producing disease, or deformity of the windpipe at its upper part in particular.

TREATMENT.

In cases depending upon tumours, &c., the only chance of effecting a cure lies in an operation.

20.—BROKEN WIND.

IN HORSES.

The phrase broken wind is applied to a condition of difficult breathing, best detected after exertion. It especially affects cart and low-bred horses, and is directly caused by improper dieting, such as feeding on bad hay, giving too much hay, driving after eating a hearty meal, &c.

The symptoms presented by a broken-winded horse have been ascribed to various pathological conditions, including emphysema of the lungs, diseases of the heart, and of the midriff. By some broken wind is considered to be a disorder of the nerve (pneumogastric) which supplies the lungs and stomach.

The animal's stomach is out of order; his belly is bloated with wind; undigested oats are voided; usually, he eats greedily, and yet does not thrive, and looks thin and seedy. He has a short, spasmodic cough, which subsequently becomes single, weak, wheezy, and suppressed. Pressure on the larynx elicits this characteristic cough. The act of taking air into the lungs is performed by one effort; whereas, that of expelling air is performed by two, and takes twice the time; this peculiarity is especially observable at the flanks after exertion. In bad cases, the anus moves backwards and forwards with each act of breathing. Horses suffering from broken wind are of necessity poor workers; and they sometimes die suddenly from hæmorrhage of the lungs.

TREATMENT.

Radical cure can hardly be looked for, but much may be done by way of palliation. It is of the utmost importance to give good food, to prevent over-loading of the stomach, to withhold chaff, and not to work the animal soon after a meal.

The two most likely remedies to be of service are *Arsenicum*, 1st trituration, 2 grains night and morning in a handful of mash, steadily persevered with for some time, and *Ammonium Causticum*, 10 drops, night and morning.

21.—THICK WIND.

IN HORSES.

This is a not uncommon sequel of inflammation of the lungs. The breathing is quick and laboured; inspiration and expiration being equally so, and occupying the same time. Exertion speedily makes manifest this peculiarity.

TREATMENT.

Little, or nothing, can be done, except by proper feeding, to given even relief. *Arsenicum* may be tried as directed for “broken wind.”

22.—CONSUMPTION.†

IN DOGS.

Consumption of the lungs is not generally recognized as a frequent disease in dogs. There can be no doubt, however, of its being a frequent and fatal complaint. In many cases of what appears to be simply disordered respiration, &c., a post-mortem examination would disclose a tubercular condition of the lungs.

The symptoms are at first obscure. The dog is troubled with an occasional cough, which the owner ascribes to a temporary cold. After a time the appetite falls off, and the flesh too, so that the animal becomes thin and weak, and the expectoration, at first scanty, becomes profuse and purulent, or bloody. In this stage the experienced practitioner can detect unmistakable evidence of hectic fever. An obstinate diarrhoea supervenes and resists all treatment, and at length the dog dies from exhaustion.

This disease is, of course, incurable.

23.—ASTHMA.

IN DOGS.

The causes are over-feeding, close confinement, want of exercise, previous attacks of lung disease, &c.

The digestive functions in particular are deranged. The appetite is little, if at all, impaired, and it may be even morbidly increased, dainties being in greatest favour with the canine epicure. The breath is disagreeable, the teeth covered *with tartar*, the coat rough and tattery, the skin

probably mangy. There is no febrile excitement. The dog may have constipation and piles. He is dull, disinclined to move, and short-winded when he does stir.

The true spasmodic asthma is characterized by fits of difficulty of breathing coming on at intervals, varying in severity, and rarely of themselves ending fatally. In the majority of cases there is also a frequent, dry, harsh cough, which is provoked by changes of temperature, by food, and by moving, and which may be attended with retching or vomiting, or the expulsion of frothy mucus, especially when chronic bronchitis co-exists. When a dog in tolerable health is suddenly siezed with urgent difficulty of breathing, and when there are no indications of inflammatory action, it is safe to conclude that he is suffering from an asthmatic attack.

Habitual dyspnoea is sometimes found to depend on emphysema of the lungs.

TREATMENT.

The curability of this disease depends for the most part on the early adoption of judicious treatment. Cure is out of the question in the advanced stages, when organic disease has become established. But even in those cases which do not admit of absolute cure, the distress and urgent symptoms may be notably relieved.

The most suitable remedies are the following :—

Arsenicum, which is indicated either in old or recent attacks, when the breathing is short and quick on exertion, or on going up an ascent, or after meals; when paroxysms of asthma come on, especially at night, are attended by panting, wheezing, and gasping for breath, and abate when a viscid mucus is coughed up; and when the breathing is worse on exposure to a cold or variable atmosphere.

Ammonium Causticum, which is a useful remedy when the respiration is quick, laborious, and suffocating, and attended with rattling of mucus, and a short, dry cough.

Ipecacuanha is indicated when paroxysms of suffocative difficulty of breathing take place during the night, and when the want of breath is urgent and distressing. Rattling of mucus in the chest, and tendency to vomit, are additional indications for this medicine.

Nux Vomica is particularly suitable for those cases of asthma, which are caused by, or occur in association with, derangement of the digestive organs, as evidenced by foul tongue and breath, impaired or depraved appetite, constipation and piles; and is further indicated when the respiration is wheezing, and the abdominal muscles in full play.

Dose.—2 to 5 drops every three hours.

FOOD, ETC.—Regular exercise in the open air, except when the weather is unfavourable, and the reduction of the food, when it has been superabundant, are important elements in the treatment.

24.—COUGH.

IN ALL ANIMALS.

In the majority of cases, cough is a symptom of numerous pathological conditions; sometimes it may be regarded as a disease of itself, because it is the most prominent and unpleasant symptom.

1. In laryngitis, the cough is harsh, rough, and painful; in chronic laryngitis, it is hoarse and paroxysmal.

2. In catarrh, it is slight, occasional, and moist.

3. In bronchitis, it is hard, frequent, and dry in the first stage; soft and moist in the second.

4. In pneumonia, it is short and frequent.

5. In pleurisy, it is short, dry, and suppressed.

6. In asthma of dogs, and broken-wind of horses, it is frequent and wheezy, and induced by the least exertion.

7. In canine distemper, there is a peculiar husky cough, apt to end in vomiting, and ushering in bronchitis.

8. The animal may cough from the lodgement of a foreign body in the throat. This part should always be examined when a patient is suffering from a frequent, hacking cough which seems to be induced by some irritation in the throat, as in pharyngitis.

9. Cough of variable character may accompany diseases of the stomach and of the liver, worms, &c.

A cough is frequently the initial symptom of some approaching serious disease of one or other of the respiratory organs; the warning should not be unheeded.

A slight cough induced by exposure to cold may end in a short time by slight mucus discharge, or it may subsequently become associated with other graver catarrhal symptoms.

TREATMENT.

It is obvious that the treatment must be regulated by two considerations,—the cause of the cough, and the pathological state with which it is allied. The primary disease must first be made out, and then treated as directed in different parts of this work; for it would be in vain to attempt to cure a cough depending on the irritation of worms, for example, without first of all getting rid of the parasites.

The following are the best remedies, when

the cough appears to be the only, or the chief derangement:—

Belladonna for dry, short cough, worst at night, and apparently caused by irritation in the throat; and for sore throat and pain in swallowing.

Arsenicum for cough worst at night, and after eating and drinking, and on going up a hill, especially when attended with difficult breathing.

Nux Vomica for dry, hoarse, spasmodic cough, worst in the morning, and after eating and exercise; and especially when the stomach is disordered—the tongue furred, the mouth foul, the appetite variable, the bowels confined, &c.

Kreosote, according to my experience, is a valuable remedy when the cough accompanies indigestion.

Drosera is often indicated for chronic coughs, when hoarse and hollow.

DOSES.—10 drops for horse and oxen; 5 for sheep and pigs; 2 to 5 for dog. Give a dose three or four times a-day.

CASE I.—COUGH IN DOG.

On the 11th June I was requested to visit a dog, the property of Major G——. The dog is a black tan, of the English terrier breed, and is aged. Has had a hard, ringing cough for many months, and has been under allopathic treatment for six months without the slightest benefit. The paroxysms of coughing are fre-

quent and protracted, day and night, and disturb the inmates of the house. Appetite good; and otherwise the dog is the picture of health.

Treatment.—*Belladonna*, three times a-day, effected a cure in a month. When I writ: (Oct. 16th, 1861), the dog continues all right.

CASE II.—CHRONIC COUGH.*

On June 29th, 1859, Colin Minton Campbell, Esq., of Hartshill, Stoke-upon-Trent, sent for me to see one of his horses, which has had a constant cough for the last four months. A veterinary surgeon in the neighbourhood *has blistered the whole course of the windpipe, and given large quantities of cough medicine without any benefit.* He states that the cough cannot be removed and that the horse will become a roarer. He wishes to repeat the counter-irritation, but as no good result followed the first application, the owner of the horse objected to its repetition. The horse is in fine condition, and the very picture of good health, but he has a nasty cough, coming on in paroxysms, or as the coachman expresses it, in a "hurricane." The attack begins with a loud, prolonged groan, which ends in a hollow, bursting, explosive cough, frequently repeated. I found the upper tushes—the horse is four years old—nearly through the gums, which were hot and vascular. I made a crucial incision over each tush, and ordered *Belladonna* to be given three times a-day. The cough gradually disappeared in a little time.

* Veterinary Homœopathy Illustrated.

25.—PLEURO-PNEUMONIA—THE LUNG DISEASE OF CATTLE.

Some authorities maintain that this destructive disease arises and extends solely by contagion; others dispute the correctness of this view. Whichever may be the more correct opinion, it is agreed upon that high-conditioned beasts are more likely to be attacked, and more likely to suffer severely than those in moderately good condition—that animals congregated together in a dirty, close, ill-ventilated byre are more liable to the disease than others differently situated—and that cows recently calved and milch cows are more particularly the chosen victims.

This disease usually begins with what often escapes observation—shivering, and, at the same time, slight cough, and diminution of milk. The appetite fails; the milk gets less, the cough becomes more frequent, and husky in character; the pulse full and up to 80 or 100 per minute; the breathing laboured, suppressed, and attended with a moan or grunt; the nasal openings dilated. As the disease advances, the breathing becomes still more grunty; the cough more troublesome; pressure on the ribs of the affected side causes the animal to flinch and grunt; coughing and moving evidently increase the pain felt

in the side, and hence the unwillingness to move and the suppressed cough; frothy mucus dribbles from the mouth.

The fixed position of the animal, the grunty, constrained breathing, the suppressed cough, the outstretched neck, and protruded head, are a combination of symptoms almost sufficient to remove all doubt as to the nature of the disease. The most decisive sign, however, is, on applying the ear to the side, to hear rubbing friction sounds over a more or less considerable area; coupled with the rattles of bronchitis, and the obliteration of the murmur of the healthy lung; followed, in the last stages, by loud rattles, from the agitation of the fluid products of inflammation in a cavity in the lung.

In the last stage, the animal's breathing is so difficult that it stands with partly opened mouth, groaning loudly and frequently. The pulse is weak and almost imperceptible; the ears, horns, and legs cold; the strength much reduced, as well as the flesh; often an offensive fluid runs from the nose, and the same is coughed up; offensive diarrhoea sets in; and before long death occurs from exhaustion.

TREATMENT.

At once remove the affected animal from its *healthy* companions, and place it in a clean and

airy byre. Give hay tea, bran mashes, gruel, &c., and during the period of convalescence be very careful not to give too much food at a time. If this advice be not attended to, and the animal be allowed to gorge itself, death may ensue even when everything promises a favourable issue.

In the majority of cases the following are the best remedies :—

Aconite for quick breathing and pulse; hot mouth, ears, and skin, and the other well-known symptoms of febrile excitement.

Ammonium Causticum should be employed at the onset of the disease when the animal shivers and trembles; the breathing difficult and laboured; the skin and horns cold.

Bryonia is required generally in alternation with *Aconite* when the breathing is short and attended with a grunt; the cough short and suppressed; the side painful to the touch, &c.

Phosphorus is indicated when the breathing is laboured and panting; a reddish discharge is coughed up; and rattling sounds are heard in the chest, the respiratory murmur of health being masked or obliterated at the same time.

Arsenicum is required when the breathing is wheezing and difficult; the pulse small and feeble; the strength prostrated; the flesh wasted away; and when there is an offensive discharge from the nose. Also in the last stage especially.

or during any period of the disease when purging comes on.

Sulphur should not be omitted when all the urgent symptoms are yielding, in order that recovery may be hastened.

DOSES.—10 drops every two hours.

CASE I.

September 15th, 1861.—I was requested by Capt. Fishbourne to visit some cattle at the Patriotic Institution, Wandsworth, which were unwell. This cow was taken unwell about a week ago, and aborted three weeks before the proper time. Symptoms:—pulse 84, small and weak; respiration quick; and crepitation throughout the whole of the right lung; pain on the intercostal spaces when pressed, causing a grunt; the head is held low, and the countenance is haggard; suppression of chewing the cud; impaired appetite; fæces scanty, and of the usual consistence. She has had *Aconite*.

Treatment.—To have *Bryonia* and *Phosphorus* alternately, every three hours. 10 drops for a dose.

17th.—Much the same. Continue medicine.

20th.—Some little improvement; pulse 78, and somewhat stronger; breathes easier; crepitation not so copious; has eaten a little, and chews the cud a little now and then. To have *Sulphur* three times a-day.

23rd.—Appetite good; cuds well, and is lively; moves freely; in short, the animal is convalescent.

CASE II.

A five-year-old, cross-bred cow, the property of Mrs. Brownson, Newton Heath, near Manchester.

November 1st, 1854, 7 o'clock a.m.—Present state:—Pulse small, weak, and 84 per minute; breathing quick and attended with grunting; frequent short, suppressed, and painful cough; excessive pain between the ribs, followed by loud grunting when the thumb is pressed against that part; the head is held low; the countenance is dejected; no appetite; the sounds peculiar to this disease are heard along the middle third of the right lung.

Treatment.—To have *Ammonium Causticum* and *Aconitum* 1, 10 drops every hour, turn about, until six doses are given; then give every two hours.

November 4th.—The cow is quite well; no one could tell she had been ailing a few hours since; she eats anything that is given, &c.

To have *Sulphur* 6, 10 drops night and morning for two days.

CASE III.

A cow, belonging also to Mrs. Brownson, purchased at the same time as the other, took ill about a fortnight afterwards. It had much the same symptoms as those given above, except that they were rather more severe—the pulse, for instance, being 94 per minute. The same medicines were given, and recovery was speedy and complete.

26.—SPASM OF THE DIAPHRAGM.

I have seen several cases of a disease which, in my opinion, is correctly designated by the above name, and is often confounded with palpitation of

the heart. "Nimrod" was the first to recognize and describe it. Since his day, others have published cases, and now there can be little doubt of its occurrence.

The following notes of one of my cases sufficiently details the symptoms and treatment:—

CASE.

On August 31st, 1850, a mare belonging to Mr. Sidebotham, Manchester, was taken ill after a very severe galloping immediately after feeding. The symptoms were:—Pulse 64, small, and wiry; respiration 42 per minute; vessels of eye turgid; strong, spasmodic, irregular action of the diaphragm, from 45 to 50 per minute; breath drawn in forcibly, attended with a snuffling noise at the nostrils, and as rapidly expelled without noise; pulsation very distinct at each side of the back. To have 10 drops of *Stannum*, 6th dilution. An hour afterwards the pulse was 40, full and strong, and the spasmodic action far less powerful. Gave 5 drops of the same preparation. Two hours afterwards, the pulse was 30, full and strong; now and then a slight spasm near the lumbur vertebræ. Repeated the medicine. Four hours later, the pulse was 36, the respirations tranquil and natural, and all spasmodic jerking or pulsations gone.

Refer to the remarks on "Palpitation of the Heart," for the symptoms which distinguish the one disease from the other.

27.—PARASITES IN THE LUNGS.

IN SHEEP, CALVES, &c.

The disease resulting from the presence of worms in the air-tubes and lungs is generally called *hoose*, or *bronchitis*. It prevails most in low, damp, marshy districts, and especially attacks young ruminants when they begin to eat grass, although adult animals are not wholly exempt.

The first marked symptom is a slight, soft, and moist, or a dry, husky cough, which comes on in violent fits. The animal is dull and drooping, and occasionally rubs its nose on the ground or against a wall. The hair or wool is dry and harsh, very different from that of healthy animals. The breathing is quickened, difficult, and apparently attended with distress in the chest. Subsequently, in addition, the animal loses flesh and strength; the eyeballs sink in their sockets; the countenance expresses anxiety; the breathing continues difficult and grunting, and death occurs from exhaustion.

TREATMENT.

It is absolutely necessary to destroy the worms, which are a species of *strongylus*. Various means have been advocated. Perhaps the best is to

cause the affected animals to breathe the fumes of burning *Sulphur* or *Tobacco*. The food must be generous, such as turnips, linseed cake, &c. As a means of prevention, turn the animals into a virgin pasture.

I have also observed good effects from *Cina*, 10 drops once or twice a-day.

CHAPTER XI.

DISEASES OF THE HEART.

DISEASES of the heart frequently occur in the lower animals, but their detection during life, as well as the discrimination of one disease from another, is a matter of considerable difficulty, in consequence of the region of the heart being less accessible to examination than is the case in the human subject.

There are, however, a few diseases of this organ which can be made out with tolerable accuracy; to them I shall confine my observations.

1.—PALPITATION.

Excessive action of the heart may occur in horses that are in feeble health and out of condition, or when strong horses have had a long run with hounds.

The symptoms are:—a dull, thumping noise proceeding from the interior of the body, and quite audible at a distance of some yards; this sound corresponds in time with the pulsations of the heart and the throbbing of the pulse. Sometimes, the heart's action is so energetic as to cause a jerking or shaking over the whole body; and the flanks are raised up likewise.

Palpitation is sometimes mistaken for what has been called SPASM OF THE DIAPHRAGM, in which a somewhat similar sound is heard. In such cases, according to my own observations, the sound could be heard a few yards off, and was very distinct on applying the ear to the back on each side of the spine. The breathing and pulse were both increased in frequency, and the thumps did not correspond with the heart's pulsations.

Horses and dogs are most liable to palpitation of the heart.

TREATMENT.

Rest the animal for a few days, be careful not to overwork him or drive him fast for some time afterwards, and pay attention to the diet.

If the stomach be disordered, treat as directed for "Indigestion," at page 90. In cases of palpitation, depending, as far as can be ascertained, on indigestion, *Nux Vomica* is especially suitable.

China should be given when there are symptoms of general debility, and poor appetite.

Aconite is especially required for energetic action of the heart, occurring in high-conditioned animals, after exertion, and attended with quick breathing.

Stannum, 6th dilution, has always cured the symptoms of spasm of the diaphragm described above.

DOSES.—10 drops for horses ; 2 to 5 for dogs.

Repeat the dose every one, two, or three hours, according to the urgency of the symptoms.

2.—ENLARGEMENT OF THE HEART.

An increase in the size of the heart is rather frequently found in animals suffering from “broken wind.” Such a disease affects the animal’s powers of endurance and speed ; and, when the animal is over-driven, may bring on hæmorrhage from the lungs.

The symptoms are :—The action of the heart is heard and felt to be stronger than it ought to be, and extending over a larger space. In some cases, the stroke of the heart against the side is very strong. The increased action dependent on enlargement is constant, unlike that found in simple palpitation. In addition, a “clacking” sound is sometimes heard.

TREATMENT.

This disease is incurable. Regulating the diet, preventing overwork, and giving *Aconite*, *Arsenicum* or *Digitalis*, will give relief and prolong life.

DOSES.—10 drops for the horse three times a-day.

3.—DILATED HEART.

This lesion may be known, as it occurs in horses, by symptoms which can hardly be mistaken. They are:—loss of appetite; languor; cold legs and ears; difficulty of breathing on the least exertion; giddiness or “megrims;” small, soft, feeble, irregular pulse; feeble, tremulous action of the heart; and, in advanced cases, swelling of the legs, chest, and belly.

This disease is incurable.

4.—PERICARDITIS.

IN ALL ANIMALS.

This disease, which consists of inflammation of the serous investment of the heart, is not unfrequent in all our domesticated animals. It may

occur as an independent affection; more usually it is a complication of rheumatism, pleurisy, and pleuro-pneumonia of cows; and it has been known to follow a punctured wound.

The symptoms are often ambiguous, and are apt to be confounded with those of pleurisy. In a fully-developed case, we find him standing still, anxious in the face, and evidently in great suffering; with his breathing much quickened and laboured, and his pulse accelerated, small, hard, and sometimes irregular. Pressure on the left side, in the region of the heart, causes flinching and expression of pain. On listening at the same part we hear rubbing friction sounds, which cease when effusion or adhesion takes place; subsequently, the heart's sounds are muffled by the effusion. In unfavourable cases, the breathing becomes more distressing, especially on the least movement; the pulse feebler and even imperceptible at the jaw; the eyes protruded and anxious; the legs and ears cold; dropsical swelling comes on in the legs, sheath, breast, &c., and death speedily follows.

The late Professor Dick, in his "Manual of Veterinary Science," gives the following case:—"I was lately consulted in a case of a mare which was taken unwell. She had left off feeding; her pulse was small and weak; her respiration scarcely affected; her mouth cool; her bowels regular;

and her ears and legs fine, but cold. On moving her about in the stall, a twitching of the hind legs of the animal was observed, as if it was affected with cramp. On applying the hand to the left side, a peculiar pulsation was felt, as if the heart was moving in a fluid. This pulsating sound was readily heard on applying the ear to the left side, and was totally distinct from the sounds produced by water in the chest. The case proved fatal, and on dissection, the pericardium was found to contain four pounds of serum."

The following case, quoted from the "British Journal of Homœopathy," for 1858, happened in my own practice :—

CASE.

On April 5th, 1858, I visited a cart-horse belonging to Messrs. Marsland, coal proprietors, Manchester, *which has been under allopathic treatment for a week and is rapidly getting worse.*

The most important symptoms are :—Pulse 120 per minute ; violent jerking action of the heart ; there is a peculiar ringing sound at every beat of the heart ; the respiration is 36 per minute ; little breathing can be heard in the left lung in consequence of the predominant action of the heart ; the urine is voided frequently and in small quantities, &c. This has been produced by a fly blister on the side. I had it washed off at once.

To have 10 drops of *Digitalis*, 1st dilution, every three hours.

On April 26th, pulse 104 and intermittent ; respiration 20 ; the violent jerking of the heart is almost gone ; the respiratory murmur is now audible in the lower portion of the lungs, and some mucous rattles in upper part ; the urine flows freely ; the bowels are moved ; the appetite is better, and the animal's appearance livelier.

To have 10 drops of *Helleborus* and of *Arsenicum*, 1st dilution, every three hours alternately.

On April 27th, pulse 95, still intermittent, but more distinct at jaw ; respiration 10 per minute ; the urine is profuse in quantity, and has a peculiar smell—the same as that which proceeds from the chest when opened after death from hydrothorax ; in all other respects better.

Continue same medicines.

On the 28th, pulse 80 ; from 16 to 20 of the beats in the minute are slower, the rest quicker than in health ; respiration normal ; appetite still improving and better otherwise. Continue as before.

On the 29th, same, except that the pulse is fuller and softer.

Substitute *Spigelia* for *Helleborus*.

On May 1st, pulse 60, full and strong ; better otherwise.

Continue same medicines.

On May 7th.—Since last report has been steadily improving in every respect ; pulse 54 ; appetite good ; has been resting.

To have *Sulphur* three times daily.

On the 12th all right.

CHAPTER XII.

DISEASES OF THE NERVOUS SYSTEM.

1.—RABIES—HYDROPHOBIA.

IN DOGS.

CANINE MADNESS occurs spontaneously in the dog, wolf, and fox, and in other animals as the result of contagion, or the direct inoculation of the poisonous saliva by a bite. The term hydrophobia, which means *fear of water*, is applicable only to the disease as it is observed in man, since, as a rule, no such dread is manifested by the lower animals.

The causes which excite this disease in the members of the canine species are really unknown. Excessive heat, contrary to popular belief, *can have no power to engender it, seeing that it is just*

as common in cold weather and latitudes as in warm.

The best description is contained in Youatt's work, from which the following extract is taken:—

“The disease manifests itself under two forms. The *furious* form, characterized by augmented activity of the sensorial and locomotive systems, a disposition to bite, and a continued peculiar bark. The animal becomes altered in habits and disposition, has an inclination to lick or carry inedible substances, is restless and snaps in the air, but is still obedient and attached. Soon there is loss of appetite and thirst, the mouth and tongue swollen; the eyes red, dull, and half closed; the skin of the forehead wrinkled; the coat rough and staring; the gait unsteady and staggering; there is a periodic disposition to bite, the animal in approaching is often quiet and friendly, and then snaps; latterly, there is paralysis of the extremities; the breathing and deglutition become affected by spasms; the external surface irritable, and the sensorial functions increased in activity and perverted; convulsions may occur. These symptoms are paroxysmal, they remit and intermit, and are often, excited by sight, hearing, or touch.

“The *sullen* form is characterized by shyness and depression, in which there is no disposition to bite, and no fear of fluids. The dog appears to be

unusually quiet, is melancholic, and has depression of spirits ; although he has no fear of water he does not drink ; he makes no attempt to bite, and seems haggard and suspicious, avoiding society, and refusing food. The breathing is laboured and the bark is harsh, rough, and altered in tone ; the mouth is open from the dropping of the jaw ; the tongue protrudes, and the saliva is constantly flowing. The breathing soon becomes more difficult and laborious ; there are tremors, and vomiting, and convulsions."

IN OTHER ANIMALS.

In horses, oxen, sheep, cats, pigs, the symptoms do not vary materially from those observed in dogs. We find, after the disease is developed, restlessness, difficulty of swallowing, modification of the voice in neighing, grunting, bellowing, &c., also biting, butting with the horns, scratching, &c., followed by paralysis and death.

TREATMENT.

From my own experience, I know of no remedy for this terrible disease. The best plan, probably, is to destroy every affected animal, in order to prevent the propagation of the disease. Youatt strongly advocates the free application of lunar caustic to the part bitten by a mad animal, as a preventive. A singular popular error is that

a person bitten by a healthy dog will have this disease if the dog should afterwards contract it. Of course, there is not a particle of foundation for such a notion.

2.—EPILEPSY.

IN ALL ANIMALS.

The true epileptic seizure may arise from worms, teething, hardened excrement, or some other cause of irritation affecting the nerves distributed to an internal viscus.* The fits may also be caused by disease of the brain, or of the cerebro-spinal system, such as, the inflammation of the brain, or of its membranes, which often proves a fatal complication of distemper. In some cases an epileptic fit ushers in distemper, but is not then necessarily fatal, nor does it hurtfully influence the subsequent progress of the distemper. Blows on the head have been known to be followed by occasional attacks of fits. Mental excitement, acting on a dog of nervous temperament, sometimes excites epilepsy. Thus, Youatt

* A case of fits, induced by a curious cause, is recorded in the "Veterinary Record," 5th vol. The dog died, and on opening it a *knitted garter* was found extending from the pyloric opening of the stomach downwards along the intestines.

records a case of epileptiform fit, provoked by music. Pointers have fits during their work, especially at the moment of the "point." Fear and joy are alike exciting causes. Animals that are travelling at a quick pace, especially if they are fat and unused to severe or long-sustained exertion, and if the weather be hot, not unfrequently have an attack. Sporting and high-bred dogs are those chiefly affected; and the young and old are equally liable to be seized, although generally speaking the attacks diminish in frequency as the dog increases in age. There is no doubt that epilepsy is hereditary. On this interesting point, Reynal states that he has met with one female and three male dogs that transmitted epilepsy to one or other of their offspring.

The attack is not ushered in by any particular symptom. The animal is suddenly seized, trembles on his legs, loses his sight; then falls down, struggles for a moment, and tries to recover his feet. Sometimes he succeeds, but generally, after stumbling about, he falls down again on his side, stupified and insensible. At the moment of seizure a low cry is sometimes uttered. During the attack, the head is in turns stretched out, bent on the neck, and violently struck on the ground; the legs are strongly convulsed, and so is the entire muscular system also, producing the *most* varied contortions of the body, from the

convulsive contraction of the affected muscles. The gums and lips are of a livid colour; the jaws are violently champed; sometimes the tongue, getting between the teeth, is bruised and lacerated; the mouth is filled with frothy mucus which dribbles from the lips, and which is coloured with blood when the tongue is bitten; the respiration is difficult and embarrassed from the convulsive and unnatural action of the respiratory movements, and it becomes rattling and suffocating from profuse accumulation of mucus in the mouth and fauces. The special senses of hearing, seeing, feeling, &c., are completely suspended during the attack. The excretions escape, and in the dog's faeces are sometimes found segments of the tænia, in which case the cause of the epilepsy cannot be uncertain. In about four or five minutes, more or less, those convulsive movements gradually begin to lessen in severity, and the senses slowly return. He opens his eyes, raises his head, looks about him in surprise, and frequently gets up and runs about as if nothing had been amiss.

The foregoing is the description of a typical attack; but in some cases the symptoms are different. Thus, under the influence of fright, the legs become stiffened; the eyes fixed, protruded, and staring; the muscles of the face and neck rigid from spasm; and the animal falls down

bereft of all its senses and paralyzed. The fæces and urine are discharged involuntarily. Some, after the attack is over immediately recover themselves; others appear to be in a drunken-like state; others conceal themselves in some dark or secret place; whilst others, again, run away from home, and return after awhile with dread and doubt expressed in gait and look. In some cases, complete recovery does not take place until from half-an-hour to an hour after the beginning of the fit; in others, the fore legs are so helpless that they are almost palsied.

Fits of an epileptiform character sometimes sieze the bitch when she is suckling too many puppies. These are absurdly called by some writers *puerperal* fits,—a term which is only applicable to the human, and not to the canine disease. They depend on a low and exhausted condition of the system consequent on the excessive drain imposed by the requirements of providing milk to a large progeny. They occur in two classes of cases:—in fancy pet animals, whose natural irritability of constitution is not diminished by the over-feeding and pampering to which they are subjected; and in those that are sacrificed to secure a large litter to the owner, and are not sufficiently supported under the large demands made upon them by their young. For the time the mother goes on “as well as can be

expected," or she becomes gradually weak and thin. Suddenly, she staggers, falls, and lies in a half-unconscious state. The convulsions which ensue are either confined at first or exclusively to the respiratory muscles, the breathing being panting and laboured; or, in the most severe cases, they involve the whole body. The fit lasts from five to ten minutes, and may prove fatal at once; or death supervenes after repeated attacks of the convulsions, which follow each other rapidly.

TREATMENT.

The treatment of epilepsy should begin with the removal of its ascertained cause. The fit usually ceases of itself, or restoration to consciousness may be aided by dashing cold water on the patient's body. Then the recurrence of the attacks must be prevented, if possible.

If the fits are connected with worms, or constipation, the treatment must be mainly directed to the removal of these two exciting causes.

When they occur towards the termination of distemper, or any other disease, and when they are symptomatic of injuries to, or organic diseases of, the brain, they are usually fatal.

If epilepsy occurs in dogs that have been overfed and confined, the diet must be reduced, and moderate exercise allowed.

When caused by the irritation of teething, it may be necessary to lance the gums, and it is always advisable to give *Belladonna*.

It sometimes happens that particular articles of food, such as flesh, disagree with some dogs, and, by exciting stomachic irritation, induce fits. In such a case, the diet must be regulated.

Youatt records the case of a patient, suckling at the time, being thrown into the *Serpentine*. Under the influence of nervous shock or fright, the milk was suppressed, and fits ensued. This cause of fits can be easily guarded against.

When the attacks have become habitual, it is imperative not only to remove the existing causes, as far as they can be discovered, but also to place the animal under a persevering course of treatment.

The medicines most useful in epilepsy are the following:—*Belladonna* for irritability of the nervous system, with twitching of the muscles, contortion of the face, and convulsive action of the muscles of the mouth; protrusion, redness, and sparkling appearance of the eyes; rigidity of the body, with the head and body drawn backwards during the actual seizure.

Chamomilla for derangement of the stomach, and colic, as denoted by vomiting of sour fluid and indications of abdominal pain, preceding the fit.

Nux Vomica when the attacks are referable to indigestion, or to constipation.

Arnica is suitable when the fits are the result of a blow on the head.

Argentum Nitricum has acted most beneficially in the convulsive seizures which come on during distemper.

Calcareo Carbonica, when the fits are connected with teething; it then appears to expedite the appearance of the teeth, thereby lessening the irritation of the dental nerves.

Cuprum is specially indicated when the attacks are caused by disease of the great nervous centres.

Doses.—10 drops for horses and cows; 5 for sheep and pigs; 2 to 5 for dogs. Give a dose every four hours during the interval between the attacks.

3.—CHOREA.

IN DOGS.

Chorea is characterized by involuntary, tremulous, and irregular motions or twitchings of those muscles which, in the healthy state, are under the influence of the will. One or several groups of muscles may be thus affected. It is most frequent in young dogs, although it may, in rare cases,

appear at a more advanced age. Debility, arising from want of food, previous illness, or any other cause that induces constitutional weakness; close confinement or overcrowding; and inherited peculiarities of temperament or constitution may be reckoned amongst the predisposing causes.

The exciting causes are less obscure. Worms, disordered state of the digestive organs, and accumulations of vitiated intestinal secretions, are probably the most frequent. Injuries to some part of the nervous system, such as blows on the head, may excite chorea. By far the most common, however, is a previous attack of distemper. Its occurrence has no relation to the severity of the distemper, as it may come on after a mild attack. It may occur either as a complication, or as a consequence of distemper.

There are cases in which the brain, or the cerebro-spinal system, is alone involved. In one case, Youatt found spiculæ of bone projecting from the parietal bone, and so keeping up meningeal irritation. It often happens, however, that no structural change can be discovered in any part of the nervous system; or, indeed, in any part of the body.

The spasmodic movements of chorea are either partial or general; usually the former. One leg or shoulder is jerked in an irregular way at fixed intervals. For a longer or shorter period, the

disordered movements affect only one limb, or both legs are affected alike; in which case, when the dog is standing, the head and shoulders are bobbed down at each movement. Sometimes the hind-legs only are attacked; or the entire body; or the muscles of the eyelids, or those of the face. These characteristic appearances vary not only in extent, but in degree, from simple catching, up to unceasing and exhausting motions, which the animal has no power to prevent or diminish. They continue either in the upright, or the lying position; and if they cease during sleep, the sleep is disturbed and unrefreshing. In many cases, sleep does not affect the continuance of these movements. The dog expresses, by moans and cries, the distress felt from his tormenting sufferings. Absolute repose is unknown to him from first to last. His temper gets irritable, especially in severe and prolonged cases; and he becomes thin and weak. In some cases, the general health is unimpaired; in others, broken down by want of rest and undue expenditure of nervous force. In some cases, the above state continues without abatement; in others, the spasmodic movements become less severe or extensive, and recovery appears at hand, but he presently relapses into his old state under the excitement of mental emotion, or a new disease. In addition to the foregoing symptoms, there may be found as pre-

cursors, or accompaniments, certain indications which point out disturbance of the digestive functions: such as variable appetite, costive bowels, tumid abdomen, foul tongue, &c. The presence of worms should be inquired into. Chorea may terminate in true convulsions, fits, or PARALYSIS AGITANS. In the latter case, the movements resemble those of chorea, but they continue invariable during sleep, are of a tremulous character, affect the whole system of voluntary muscles, and are aggravated by whatever excites alarm or fear. In chorea, the dog is quite conscious, and his power of volition remains good. The choreic movements do not occur in paroxysms; and the muscles which are affected with unnatural and unsteady movements are still under the influence, but not under the absolute control of the will. There is no febrile excitement whatever.

IN OTHER ANIMALS.

Chorea is not unknown amongst horses and cattle, but it much less rarely attacks them than dogs.

TREATMENT.

The following remedies are respectively indicated by the subjoined symptoms:—

Nux Vomica: confined bowels, impaired appetite, and the other symptoms of stomachic

disorder ; trembling or convulsive jerking of the limbs, or of sets of muscles ; irritability of temper, &c.

Ignatia : convulsive movements of the limbs, eyes, eyelids, or muscles of the face, aggravated by fright.

Belladonna and *Cuprum Aceticum* are sometimes productive of benefit.

DOSES.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs.

FOOD, ETC.—Chorea is one of those diseases that are as much benefited by hygienic means as by purely medicinal remedies. The food must be particularly attended to. Boiled rice with beef-tea and no solid meat, are the best, as being bland and unirritating to the stomach. Bread-sops and oatmeal gruel may be allowed as a change. Bones are out of the question. The dog's head should be steadied, if necessary, whilst he is eating and drinking ; the chief point, however, is to give *small quantities* of the suitable food, unheeding the dog's voracious appetite. A cold douche-bath is often beneficial.

4.—TETANUS.

IN HORSES.

Of all animals, the horse is especially liable to tetanus—a disease of the upper part of the spinal marrow, characterized by unremitting spasm of all the muscles of the body. There are two forms: the *idiopathic*, which arises from exposure to severe weather, and irritation of the stomach and bowels; and the *traumatic*, which follows wounds and other injuries, such as broken knees, open joints, bruises, nicking or docking the tail, punctured wounds of the feet, castration, fractured bones, &c.

As a rule, the symptoms come on slowly. In the earliest stage, the muscles of the jaw and neck are the first to be attacked, and hence the convertible term of the disease—LOCK-JAW. The animal manifests some difficulty in gathering his food with his lips, in swallowing, in moving his head and neck, and some degree of general stiffness in walking. Later, the muscles of the jaw are firmly contracted, hard to the touch on the cheek, and more or less completely close the mouth; so that by no force can the jaws be separated, nor can food by any means be nibbled up. *The eyes are fixed, squinted outwards, pulled*

backwards into their sockets, and the "haw" drawn in front of the eyeballs. The neck is stiff and cannot be moved, and its muscles hard and rigid. The head is held firmly in one position, with the muzzle pointed forwards; the nostrils are expanded; the ears project forwards, erect and fixed; the lips are stretched firmly across the front of the teeth, exposing them to view; and slaver dribbles from the mouth.

The belly is tucked up, contracted, and hard to the touch; the tail is elevated and in a constant tremble; the anus is firmly contracted; the urine scanty and the bowels confined. The animal stands resolutely fixed to one spot, with all his legs stretched out; if perchance he move, or be made to move, he does so, not in detail, but all of a piece, like a thing without joint or suppleness, and the least effort evidently causes acute suffering. The breathing is quickened, short, and constrained; the pulse frequent and hard.

The spasmed muscles are screwed up to a still higher degree of agonizing tension by any excitement; such as loud noises, angry talking, and even by light and rustling of straw. When the animal is kept in a dark, quiet box to the care of an attendant who does his work with kindness and stealth, the spasms slacken somewhat, although the muscles are never wholly relieved from the tetanic grip until the disease is on the decline.

In very acute cases, the animal appears completely overwhelmed by the severity of the disease, and death occurs in a few hours; in others, death may not happen for several days.

TREATMENT.

The animal must be placed in a darkened box, and be kept perfectly quiet and free from noise or excitement of any kind whatsoever. It must be protected from cold, put on sufficient warm clothing and bandage the legs with flannel. A man in attendance must do his work in the quietest manner possible, and keep his voice low and still. Thin gruel, milk, linseed and hay oil, slightly warmed, should be frequently offered. As the jaws open, boiled turnips, bran mash, bruised oats, are the best. After convalescence is fairly established great care must be exercised to prevent overloading of the stomach.

The best remedies are the following:—

Aconite and *Belladonna* are the best at the onset of the attack, when the disease can be traced to exposure to cold or damp. Give them in 10-drop doses every two hours alternately.

If there be no improvement in a few hours, I would recommend *Aconite* to be stopped, and *Nux Vomica* to be given in the same doses, three times alternately with *Belladonna*.

Arnica is especially suitable when the disease

is the result of wounds, and injuries in general; and in nine cases out of ten it will be necessary to give it in alternation with *Belladonna*, as directed above.

In the fully-developed stage, with intense rigidity and exacerbation of spasm on the least excitement, I would give *Nux Vomica*, alternately with *Arnica* in traumatic cases.

Each dose must be mixed with a tablespoonful of water, and this mixture injected into the mouth, by means of a syringe fitted with a long nozzle, which will admit of being insinuated between the upper surface of the tongue and roof of mouth, to the back part of the mouth. Or, having first cleared out the bowel by an injection of warm water, throw up 20 drops, or double the usual dose, of the medicines above mentioned.

It is impossible to lay down more precise rules for the treatment of such a disease as tetanus, which requires careful individualizing in each case, such as a practitioner on the spot, and conversant with the specialties of the symptoms can alone do.

In the only three cases that I have ever treated throughout since I adopted homœopathy, with the result of two recoveries, the medicines used were *Arnica*, *Nux*, and *Belladonna*.

Encouraged by the testimony of observant veterinarians, and by the recovery of a man suf-

fering from severe tetanus, treated by me. Dr. Moore, who has reported it in the "Journal of Homœopathy," vol. xxiv., p. intend on the first opportunity to try *P Acid*, 10 drops, 1st dilution, every two hours, in tetanus attacking the horse.

Some years ago, I proposed on being called in consultation with Mr. Williams, V.S., to use *Chloroform*, as an injection. At the same time homœopathic medicines were given, and, I understand, the case recovered.

Wounds and injuries, if still unhealed, should be treated with *Arnica Lotion*. If the foot has been pricked in shoeing, the shoe must be removed, the horn pared away, and a poultice applied; adding some *Arnica* to the poultice.

5.—HYSTERIA.

This name has been applied at my suggestion by Mr. Haycock, of Manchester, to a rare disease of the mare. The late Professor Dick, in his "Manual of Veterinary Science," mentions that he recognized three cases of it, also in mares. The pathology of the disease is quite unknown.

at the present time. The symptoms are not unlike those which are observed in cases of spinal apoplexy befalling the human subject.

The attack comes on suddenly, especially in mares that have rested and then worked hard, or have been lively and frisky at exercise. They begin to stagger, appear stiff and sluggish, are indisposed or unable to move on, and evidently wish to lie down. The hind legs appear to be partially paralyzed. I have seen them standing on their fetlocks, with the soles of the hoofs turned backwards and upwards. When got into the stable, they lie fully extended on the ground, covered with sweat. They are every now and then seized with violent spasm, roll violently about and strain strongly, when dark-coloured urine is discharged; the eyeballs are full and projecting, the eyes red; the muscles of the belly and legs are strongly contracted, and as hard as a board to the touch. The pulse and respiration are considerably increased in frequency. Symptoms of complete paralysis of the hind legs appear, the animal makes desperate attempts to get up but cannot, and soon sinks exhausted. In some mild cases, the severe symptoms abate and the animal recovers. Such are the most important symptoms of this curious disease.

TREATMENT.

Begin with *Aconite* and *Belladonna*, drop doses, every half-hour, or hour alter. If, after a few doses have been given, the is better, continue them every two or three increasing the interval between the doses a ing to the improvement made.

If there is no change for the better, give *Vomica* in the same manner, instead of the two medicines; it is likewise required in re ing cases when the paralytic symptoms d clear off rapidly.

Acidum Hydrocyanicum (prussic acid) v I think, be a likely remedy of value in cases, especially when the convulsive stru are strong, and the muscles hard and firmly tracted.

 6.—MEGRIMS.

Megrims means the same as *vertigo* and *giddiness*, and depends upon a congested state of brain. Although giddiness is a symptom of mours and other lesions of the brain, "megri is generally restricted to that particular giddi which never comes on except when the anim at work in a collar, and which is due to pres

on the jugular veins. A tight or badly-fitting collar is the direct cause, by impeding the return of blood from the brain along the jugular veins; and violent exertion, hot weather, dragging a heavy load up a hill, &c., determine the attack. Some horses are so peculiarly shaped in the neck that they become giddy even with a well-fitting collar. Megrimis from obstruction of a jugular left after bleeding with the fleam, is much rarer now-a-days than formerly.

I have known saddle-horses seized with giddiness, spin round and round, and throw the rider off. Whether this arose from organic disease, or from temporary causes independent of all restraint affecting the neck, it is impossible to say.

The symptoms come on suddenly. The animal whilst going along suddenly stops, raises and shakes his head, looks wild with staring eyes, looks stupidly about him, and staggers or sways from side to side. If the collar be not at once drawn forwards towards the head, the animal reels and falls down in a heap, or he springs forwards and falls heavily against any obstruction that may be in the way. He may now be convulsed more or less, the breathing being quickened and the nostrils dilated. Presently he gets up conscious, shakes himself, looks above him as if wondering what it all meant, and is soon himself again.

TREATMENT.

When the giddiness depends upon organic diseases of the brain, the case must be regarded as incurable. When it arises from a too-tight ing-rein, or from an ill-fitting collar, the measures preventing an attack are obvious enough. When an attack threatens, the collar should be speedily pulled forward, and cold water dashed on the head. If the animal be fat and full-blooded, the diet should be reduced.

The following is an interesting case :—

CASE.

In October, 1850, I visited a valuable carriage belonging to H. P. Ree, Esq., of Manchester, for four years has been the subject of megrims.

He is affected thus :—whilst being driven he stops with alarming suddenness—throw up his head and shake it wildly—turn round and round, the coachman having no control whatever over his movements. Sometimes he will stand still for a minute or two, and then go on as if nothing had been amiss. The same phenomena are exhibited when the coachman is alone with him : he will hurriedly, and without a moment's warning, whirl round and round, and will sometimes fall down on his knees ; then the attack being over, he seems all right.

I gave 10 drops of *Arnica*, 1st dilution, night and morning.

This treatment was continued for a week, when the attacks having come on, it was suspended.

Eight months afterwards he had another seizure; the same medicine effected the same results as before.

He had, to my personal knowledge, no attack after this. Having become a roarer, he was sold seven years after my first visit, and then I lost sight of him.

Besides *Arnica*, *Arsenicum*, *Belladonna*, and *Nux Vomica*, are the most likely medicines to do good. The two latter have proved the most successful in my hands.

DOSES.—10 drops night and morning continued steadily for some time in relapsing cases.

7.—APOPLEXY.

IN HORSES AND DOGS.

This disease occasionally attacks horses, more frequently dogs. In the former animal there are generally some warning symptoms, such as, hanging the head low, or on the manger, staggering and unsteadiness in standing, and an inclination to fall down in walking; the animal does not appear to hear or see anything. Subsequently, he suddenly falls down and grinds his teeth; the eyes are protruded, fixed, and staring; the pupils are dilated; the muscles over the whole body are twitched, and later on, convulsed violently; and death soon occurs.

In the dog the symptoms of the attack are, that it is almost, or wholly insensible, lying motionless, and breathing heavily and noisily. The eye is fixed, and suffused with blood; there is no foaming at the mouth. In some cases death is instantaneous; and, of those that are not so, the majority are fatal under any treatment whatever.

TREATMENT.

The medicines most likely to do good are *Aconitum* and *Belladonna*, given every half-hour alternately, commencing with the former. *Opium*, in the same way, is indicated when the breathing is loud and heavy, and the insensibility profound.

Doses.—10 drops for horses; 2 to 5 for dogs.

8.—STURDY, OR GID OF SHEEP.

The disease thus commonly named is very frequent amongst sheep in some parts of this country, and depends upon the presence within the skull or in the brain of the bladder-form of the tape-worm derived from the dog. When dogs are fed with these worms from a sheep suffering from sturdy, the fully-developed tænia

is found more or less abundantly in their bowels within a few weeks afterwards; and when the joints of the same *tænia* are given to lambs, sturdy is developed in them. Consequently, whenever a shepherd's dog has tape-worms, the lambs and young sheep are certain to be the victims of sturdy.

At first when the bladder is small there are no symptoms of significance, but when it increases in size, and presses upon the brain various symptoms make their appearance, varying with the position occupied by the hydatid and the particular part of the brain upon which the pressure is exercised; and varying partly also owing to the soft bone of a young animal's skull yielding to the enlarging hydatid underneath. The sheep is dull, chews its food slowly and carelessly, and staggers when walking; from these latter symptoms the disease has received the name STAGGERS. When the bladder is situated in the substance of the brain, the sheep turns round and round with the head turned on one side, according as the right or left side of the brain is affected; and when located in the central line of the brain, the animal carries its head upwards and forwards. In some cases, it stands before a pool of water, apparently looking into it, and sometimes tumbles in and is drowned. In others, when quietly nibbling grass, it suddenly starts as

if in a fright, and scampers over the field. The bones of the skull should give way to the hydatid, the pressure on the brain is so much the less, the sheep previously giddy and dull, becomes steady for a while; or it may improve considerably should the skull open and the fluid containing the hydatid escape. As the hydatid is reaching a larger size, the giddiness and turning of the head are greater, more frequent, and more continued. Paralysis and inability to stand up supervene. Other peculiarities are noticeable. When the optic nerves are involved, the pupils are dilated, the eyes protruded and prominent, and vision more or less impaired—as we infer from the animal not going along with its companions, striking against trees or any other obstacle in its path, &c. When the hydatid is situated in the cerebellum, or in the brain, the animal's movements are peculiar. It walks stiffly, leaps and falls, struggles and rolls about unsteadily on its legs, and so on. In all cases, whatever the general or special symptoms may be, there is progressive wasting and weakness. Death is the usual termination, unless the hydatid be removed by a natural effort or by an operation.

TREATMENT.

The only treatment that avails in this disease is to extirpate the hydatid after the manner

the Scotch shepherds, who feel for a soft part of the skull, pierce this part with a "borer," draw out the fluid in the bladder with a syringe, and sometimes drag out the bladder itself. I have seen them use a stocking wire. Such measures often succeed, especially when only one bladder exists and the operation is not too long delayed. Dogs suffering from tape-worm should be banished from a sheep farm.

9.—MAD STAGGERS—INFLAMMATION OF THE BRAIN.

IN HORSES.

This disease, which is not of very frequent occurrence, arises, especially in full-blooded subjects, from severe exertion, exposure to great heat, and, in many animals, from injuries to the head.

In veterinary practice, it is impossible to distinguish inflammation of the membranes of the brain from that of the substance of the brain itself, as can be done with tolerable accuracy in man. It is singular, too, that all veterinary writers describe inflammation of the brain occurring in

animals as attended with symptoms of drowsiness in the early, and of excitement in the late stage; whereas, the reverse happens in the human subject. Moreover, the horse disease is associated with stomach staggers,* either as cause, accompaniment, or result, and the general symptoms of the two diseases are so analogous as to make the confusion still greater. Both require further investigation from a pathological stand-point.

The disease which we, at present, call "staggers," has the following symptoms. The horse is dull and sleepy; he yawns, closes his eyelids, rests his head on the manger, and droops. Whilst in this position, he will tumble backward or fall down, and, on recovering himself, he is surprised for a moment and presently goes to sleep again; or he takes a mouthful of hay, chews lazily, and ere he can swallow the morsel, drowsiness overpowers him. The pulse is slow and respiration often noisy. The bowels are usually constipated. Such symptoms may continue several days, and end in recovery or death. If they are followed by delirium, during which the animal plunges and knocks himself about in the most dreadful manner. Such paroxysms of violence recur, until eventually the animal is exhausted, and dies in convulsions.

* See page 95.

IN OTHER ANIMALS.

Oxen, sheep, and pigs are sometimes the subjects of this disease. In them the symptoms do not differ materially from those present in the horse.

TREATMENT.

In this severe disease, the sooner the treatment is begun, the greater are the prospects of a successful result. Under even the best circumstances the disease is one that is attended with considerable mortality. Perfect quiet is desirable, and a darkened stable.

The most likely medicines to be of service are :—

Opium when the horse is drowsy and sleepy, and hanging his head on the manger; the pulse low and the breathing noisy and rattling in the throat; the bowels constipated; and when the animal relapses into his dozing condition after being aroused.

Belladonna is required when the attack is traceable to exposure to the sun, and when the eyes are red and eyeballs prominent; fierce expression; dilated pupils; and furious delirium.

Zincum Met. should be tried for half-closed eyes; dilated pupils; drowsiness amounting almost to unconsciousness; weak pulse; laboured, impeded respiration; and cold extremities.

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Aconite may be required when the dis- symptoms yield, and the pulse becomes full frequent, the eye flushed, the mouth hot dry, &c.

Doses.—10 drops for horses and oxen ; 5 for and pigs ; 2 to 5 for dogs.

10.—PARALYSIS.

IN HORSES AND OXEN.

Paralysis means a total or partial loss of power of feeling, or of moving, or of both, limited to one part of the body, or affecting the whole of it.

FACIAL PARALYSIS is confined to the muscles of the face, and is chiefly caused by pressure on the nerves of the face by heavy head-gear, by exposure to draughts of cold air. Usually only one side of the face is involved, sometimes both. The lip, especially the corner of the lower one, hangs down motionless and appears to be swollen ; the lips on the sound side are drawn towards that side and the angle of the mouth drawn upwards. When the horse eats, he turns his head on one side—on the healthy side, so that

he may use the unparalyzed side of his lips. The food is not chewed so well as usual, and it becomes crammed in between the teeth and cheek of the diseased side; and sometimes the morsel drops out. In some cases, the prick of a pin is not felt—showing paralysis of sensation as well as of motion.

HEMIPLEGIA occurs when one side of the body is paralyzed. This rare form depends on effusion of blood or tumours on one side of the brain, or in the upper part of the spinal marrow. It comes on suddenly like "a stroke." The animal falls down and cannot rise without help. The head is drawn to one side; the ear hangs down useless; the eye squints; a fore and hind leg of the same side are weak and cannot be voluntarily moved; and the animal either cannot walk at all, or he does so in an awkward, hobbling manner.

PARAPLEGIA consists of paralysis of the hinder half of the body, and depends upon disease of the spinal marrow, fractures of the vertebral bones, &c. When the disease is fully developed, we observe that the animal is unable to stand, and tumbles down; he struggles to get up, raising himself on his fore legs, with his haunches remaining powerless on the ground, like a dog sitting. In this position, he may drag himself along the ground for a few paces. If he is raised on his feet, he cannot stand long, or at all, on his

hind legs; the hind pasterns double under, the soles of the hoof looking upwards. If recovery takes place, or he is destroyed, the symptoms of paralysis continue the same, the urine and faeces escape involuntarily, and the hind mortify.

IN DOGS.

Paralysis may affect the entire muscular system, or only certain groups of muscles. The frequent paralysis is that which involves the hind legs, and which is more especially met with complication, or sequel of distemper.

The loss of muscular power and the weakness in walking are generally gradual in their development; in some rare cases, however, the dog is suddenly struck with paralysis. Wasting of affected limbs and general emaciation follow. Paralysis varies from simple muscular weakness causing tottering and feebleness in walking, to absolute palsy, and then the dog drags his hind legs after him along the ground. So what similar symptoms attend rheumatism of muscles of the back—a disease that is sometimes confounded with true paralysis.

TREATMENT.

In all cases, treatment, in order to be successful, must be steadily continued for some time,

even in the most favourable cases for recovery, improvement and complete restoration cannot be brought about speedily. Where the paralysis comes on suddenly from a severe injury, such as may be received in casting, from falls, from injuries to the spine in jumping, &c., the bone of the back may be broken, or the spinal marrow itself so much damaged as to preclude recovery.

The best medicines are the following:—

Arnica is required when the paralysis follows injuries, blows, heavy bodies falling on the back, &c. *Arnica Lotion** should be applied night and morning at least to the part.

Rhus Toxicodendron when the paralysis is the result of a sprain, or over-reach, as in jumping. Apply *Rhus Lotion** also.

After an injury is received, some degree of feverishness usually follows in a few hours; in such a case, *Aconite* will prove useful.

Belladonna is required in those cases which have come on gradually, and are presumed to depend on congestion.

Nux Vomica, when there is reason to believe that the nervous centres are free from congestion, and that the paralysis is due merely to diminished nutrition of the spinal cord.

Graphites I have found to be the best for

* See list of local applications.

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facial paralysis, and have cured many with it.

Doses.—10 drops for horses and cows; 5 for and pigs; 2 to 5 for dogs. Give a dose times a-day.

11.—STRINGHALT.

IN HORSES.

This name is given to a peculiar movement of the hind leg, arising from irregular spasm action of the muscles, owing to some uncovered disease of the nerves. Oliphant, in "Law of Horses," says "it is probably so called from its resemblance to the sort of halt produced by a string tied to the leg of a pig, held in the hand of the person driving it." gally it constitutes unsoundness. It is incur

CHAPTER XIII.

DISEASES OF THE EYE.

1.—OPHTHALMIA.

IN HORSES.

THIS is the name for inflammation of the mucous membrane which lines the inner surface of the eyelids, and is reflected over the front of the eyeball. The most frequent causes are, injuries from a stick or whip, or knocking the eye against a hard body; the irritation caused by a seed, a bit of hay, or dust getting into the eye, or by the ingrowing of an eyelash; and an unhealthy condition of body induced by living in a damp; ill-ventilated place. In catarrh, as has been stated in my remarks on that disease, the eye is more or less inflamed.

The eyelids are swollen and closed, and there is a copious flow of scalding tears which run

nature, these granulations cease to sprout; they begin to disappear; the ulcer diminishes; it heals; scarcely a trace of it can be seen; the cornea recovers its perfect transparency, and vision is not in the least degree impaired." This description applies to that form of ophthalmia which so frequently accompanies an attack of distemper. It differs from the other form in being preceded by an early and somewhat copious formation of matter, and involving *the deeper-seated structures* of the eye. Sometimes both eyes are attacked; generally only one.

Meyrick describes "another and totally distinct kind of ophthalmia" in the following words:—"A slight redness of the whites of both eyes, with inflammation of the lids; pustules, terminating in very small ulcers, form round the ball of the eye; there is no thick discharge as in common ophthalmia, but the eye waters copiously, particularly when it is touched or examined." These symptoms are generally observed in mangy, or weakly dogs, badly fed and housed.

IN OTHER ANIMALS.

Besides the general causes, one almost peculiar to oxen operates in the production of ophthalmia—it is inversion of the lower eyelid, whereby the lashes are turned inwards and keep up constant irritation of the part. This condition is

down the face and fret the skin. At the of the eyes a small quantity of thickish is observed at a later period. There is sensitiveness to light, and a strong reluctance to separate the lids, or have them separated by force. On examination, the membrane of the eye is seen to be red and traversed by a network of fine vessels, and the front part of the ball (cornea) is dim and muddy. In acute there may be quickened pulse and other indications of feverishness; in chronic, there are such.

IN DOGS.

In some cases, the inflammation, at first limited to the conjunctiva, extends to the other structures of the eye. In addition to the foregoing symptoms, enlarged blood-vessels may be seen as lines extending over the cornea; the pupil is blocked up by a whitish-looking exudation, the aqueous humour presents a reddish tinge. When the cornea is seriously implicated, an ulcer appears in its centre. The ulceration either remains stationary or increases in depth and width until the cornea is penetrated and the aqueous humour escapes. Then rank, tender granulations spring up from the ulcer, and rapidly grow and protrude through the lids. As Youatt concludes: "Under proper treatment, or by a process

nature, these granulations cease to sprout; they begin to disappear; the ulcer diminishes; it heals; scarcely a trace of it can be seen; the cornea recovers its perfect transparency, and vision is not in the least degree impaired." This description applies to that form of ophthalmia which so frequently accompanies an attack of distemper. It differs from the other form in being preceded by an early and somewhat copious formation of matter, and involving *the deeper-seated structures* of the eye. Sometimes both eyes are attacked; generally only one.

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IN OTHER ANIMALS.

Besides the general causes, one almost peculiar to oxen operates in the production of ophthalmia—it is inversion of the lower eyelid, whereby the lashes are turned inwards and keep up constant irritation of the part. This condition is

called *Trichiasis*, by Dick. Blaine asserts after hunting in cover, dogs are siezed ophthalmia from eating "some poisonous he what he does not mention.

TREATMENT.

It is necessary to examine the eye for foreign bodies, and, of course, to remove them, if found. The usual place for such bodies is under the upper lid, which should be turned inside out by turning the edge of it between the finger and thumb, and turning it out on the point of the finger. In all cases, the eye should be bathed with warm water three or four times a-day, light excluded, and no work allowed for a few days. Much relief may be given, when a small portion of the cornea has been removed by a blow, or lash, by applying a drop or two of castor oil to the injured eye. Whenever injuries have been the cause, *Aconite Lotion* * should be dabbed on the outside several times a-day.

Aconite is required when there are symptoms of feverishness.

Belladonna, when the eyes are very sensitive to light; the membrane of the eye red and inflamed; the tears copious; and the lids swollen and shut.

Mercurius Corrosivus is indicated, especially

* See list of local applications.

after, or alternately with the last medicine, when there is secretion of mucus with sticking together of the lids, and when the cornea is hazy.

Euphrasia is sometimes of service when there is copious secretion and flow of tears and great intolerance of light.

Nux Vomica may be required alone, or alternately with *Belladonna* or *Mercurius*, according to the indications for each, when there are symptoms of indigestion.

Sulphur is often valuable in chronic intractible cases, especially in mangy dogs.

DOSES.—10 drops for horses and oxen ; 5 for sheep and pigs ; 2 to 5 for dogs. Repeat the doses every two or three hours, according to the violence of the symptoms.

2.—PERIODIC OPHTHALMIA.

This disease, which is exclusively confined to the horse species, unlike simple conjunctiva, consists, not merely of inflammation of the superficial membrane covering the eye, but of inflammation of the entire eyeball—of all the structures enclosed within the globe. It is called *periodic*, from its relapsing or recurrent character; *specific*, from its presumed dependence upon some special

constitutional cause, of which no one knows anything; and *moon-blindness*, from its frequent occurring at the time of the moon's eclipse. None of these names correctly expresses the disease really is.

Some horses are more susceptible to it than others; those, namely, of lax and flabby constitution, with flat feet and thick skin, and soft-hoofed and funky at their work, especially if they have been bred and reared on damp clayey soil, exposed to a humid atmosphere, fed on poor food, overworked, and kept in an ill-ventilated, lighted, ill-drained stable. Pig-eyed horses, in whom the eye is small and sunk into the socket, are also peculiarly liable to suffer from this disease. It is beyond doubt that this affection is hereditary—that is to say, a sire or dam suffering from it, or blind from it, will transmit a tendency or predisposition to their progeny. It is more frequent in horses than in mares, and in young horses than old—both circumstances being explained by the local afflux of blood to the eye during dentition, and the irritation of cutting canine teeth, which are absent in the mare.

The symptoms begin either gradually, with slight weeping and injection of the eyes, or suddenly, perhaps during the night, with swelling and nearly closed eyelids, and profuse discharge of tears. On making an examination, the an-

shows his dislike to have the lids separated, and we discover that the eye is extremely sensitive to light and pulled backwards into the socket, that the "haw" is red, swollen, and drawn partially in front of the eyeball, and that the conjunctiva is everywhere highly injected and red. At the same time, the pulse is full and frequent, the mouth hot and dry, the bowels costive, the urine scanty—all indicating a certain degree of feverish excitement which varies with the suddenness of the attack and rapidity of its progress. In a few days, more or less, the turgid vessels are observed as minute red lines running into the rim of the transparent cornea, and the latter now presents a whitish appearance, either from being rendered opaque in itself, or from turbidity of the clear internal humours, or from deposits of lymph exudation. In favourable cases, the symptoms subside, often very quickly, the intolerance of light becomes less, the superficial redness disappears, the exuded matters are absorbed, and, in a first attack, the eye is restored to its healthy condition. In bad cases, the internal structures of the eye become permanently clouded, or utterly disorganized, and vision is lost for ever.

The chief peculiarity of the disease is that the most favourable cases relapse, or subsequent attacks recur. The disease may fly about from

one eye to the other, and its duration extends over several weeks, or even months—each attack leaving the eye more and more damaged, until it exhausts itself in the utter destruction of the eye for all visual purposes.

Probably it would be found, if an examination were made by means of the ophthalmoscope, as used in human practice, that even in the earliest and trivial attack to superficial inspection, the delicate structures of the interior of the eye are irretrievably damaged. To the view of the naked eye, the most notable changes are opacity of the crystalline lens, constituting CATARACT; specks on the cornea, or a diffused dimness; and a shrunken, pointed condition of the eyeball.

TREATMENT.

This is a most provoking disease to treat, when a case is to all appearances doing well, and a relapse takes place, and matters are as bad as ever, or even worse; and when one eye makes a tolerable escape, the sound one is attacked in its turn. Such a feature is, however, unavoidable, and as much an essential of the disease as CATARRH to be attended with a running discharge. Under allopathic treatment, the uselessness of bleeding, purges, fomentations, setons, blisters, eye-washes, &c., is admitted on all hands. Compared with it, HOMŒOPATHY, without pretensions,

ing to save every eye, may confidently avow its superiority.

The animal should be placed in a darkened box, and light kept carefully excluded until the intolerance of light is notably less.

In the earliest period of the disease, when the animal is feverish, the pulse being quickened, the mouth dry and hot, &c.; and when the lids are almost shut and swollen, the membrane covering the eye injected, and the flow of tears copious, give *Aconite* and *Belladonna*, in turn, every two or three hours.

When the general feverishness is reduced, but the eye still remains inflamed superficially, and we notice a whitish, or brownish appearance in the interior, give *Belladonna* and *Mercurius Corrosivus*, in turn, every two or three hours, until the symptoms abate, when they may be given less frequently.

From the very outset and throughout the course of the disease until the attack is fairly over, and the eye is resuming its natural clearness, it is of the first consequence to apply to the outside of the eye, and also, if possible, under the lids, *Belladonna Lotion*, which is made by dissolving 2 grains of the extract in one ounce of water. Pour some into the hollow of the hand and apply several times a-day.

When the red and injected appearance of the

eye is decidedly reduced, I would recon-
Mercur. Cor. to be steadily continued for
time, three or four times a-day, so long as
opacity of the cornea, or dimness of the in-
humours remains.

In relapsing, recurrent cases, attention
be paid to the ventilation and drainage of
stable, and the animal should be placed on
steady course of *Arsenicum*, 2 grains of the
trituration, three times a-day; suspending it
resuming the above medicines, should acute
sub-acute symptoms return.

I would likewise suggest a trial of *Kal-*
chromicum.

DOSES.—10 drops of the above medicines.

3.—CATARACT.

IN ALL ANIMALS.

Cataract consists of opacity of the crystals
lens, or of its capsule, or of both. The lens is
more frequently found opaque than the capsule.
In health both the lens and its investing mem-
brane are perfectly transparent. The opacity

affect the whole or only a part of either of these structures.

The capsular variety of cataract is generally caused by inflammation, or by wounds or blows affecting the whole eyeball, or part of it. The opacity then comes on very quickly.

Opacity of the lens itself, although it may arise from the above causes, is usually found in old animals as the consequence of senile degeneration of tissue from imperfect nutrition, and in horses as a very frequent consequence of "periodic ophthalmia."

The opacity that supervenes on inflammation is more likely to be removed than the form produced by old age which always gets worse and worse.

Cataract may affect both eyes, or only one. In old animals both eyes are usually cataractous, one wholly so, the other in part; whilst, if the opacity should have followed a blow or penetrating wound, the injured eye only is affected, and the other will remain sound until old age creeps on. As a rule, the blindness of old age depends on cataract.

Cataract is known by seeing behind the pupil an opaque body of a whitish-grey colour, which is best seen when the pupil is dilated by the previous application of *Atropin*. This preliminary step should always be taken in aid of correct diagnosis, when the case is doubtful. Of course,

vision is more or less imperfect in proportion to the size and situation of the cataract. From the movements and behaviour of the animal, the inferences may be drawn that vision is better in the evening or in a subdued light, than it is in the full sunshine; and that it is improved so long as the pupil remains dilated under the action of *Atropin*.

TREATMENT.

No medicine can remove cataract, as far as I know. And, in animals, an operation is practically useless.

4.—AMAUROSIS.

IN ALL ANIMALS.

Amaurosis, or gutta serena, is the name applied to a disease, in which the optic nerve, or the brain, is so disordered, as to give rise to imperfect sight. Amaurosis may be consequent upon some structural disease of the brain, or of the optic nerve. It may follow a blow, or some other form of violence received on the head; and it has been known in dogs, to come on during immoderate

suckling, and after excessive loss of blood. In some cases, it is difficult to make out the cause.

In *gutta serena* the eye is clear, bright, and transparent; the pupil is dilated, and the iris sluggish at first, immoveable afterwards, as tested by the introduction of light into the eye. The movements of the animal show that there is partial or total blindness; he stumbles against every object in his way, and his whole gait is peculiar and characteristic. These symptoms may depend on several different pathological conditions of the interior of the eye. The human oculist has proved, by means of the ophthalmoscope, that the lesions which affect the internal structures are numerous and various, and that they are improperly classified under the general head of amaurosis. But such distinctions have yet to be drawn in veterinary pathology. The old names, though wanting in scientific accuracy, are retained as conveniently designating those cases of blindness which are dependent on obscure and unascertained changes in the visual apparatus, especially the nervous part of it.

TREATMENT.

Medicines have little or no effect on this disease. Attention should be paid to the general health.

5.—WATERY EYE.

IN DOGS.

Watering of the eye is a frequent symptom when the mucous membrane of the eye is inflamed. The mechanism for the conveyance of tears from the eye into the nose is obstructed by slight inflammatory thickening, or by accumulation of mucus, or by slight displacement; and the consequence is, that the tears flow over the cheek, more or less profusely.

Some dogs, as the Blenheim spaniel, have a watery state of the eye as a constitutional peculiarity.

TREATMENT.

This symptom ceases when the inflammation subsides, under treatment already given.

The general health should be attended to by means of proper diet, ventilation, cleanliness, &c., in those cases which are non-congenital, and independent of disease of the eye itself.

6.—FISTULA LACHRYMALIS.

IN DOGS.

This means a fistulous opening at the inner corner of the eye, communicating with the lachrymal sac. It begins with more or less obstruction of the nasal duct, which conveys the tears from the eye to the nose; this obstruction often depends on thickening of the mucous membrane lining the canal. The consequence of this obstruction is that the tears run over the cheek, and that some of the tears accumulate in the sac, forming a small tumour, called *mucocoele*. When this swelling is pressed upon, tears and mucus can be squeezed upwards into the eye, or, if the obstruction in the duct is only partial, downwards into the nose. The mucocoele is seated below the inner angle of the eye, and alternately disappears and returns. The accumulation of mucus and tears in the sac is followed by inflammation and suppuration; an abscess is formed, which bursts externally, and leaves a fistulous opening through which the tears escape from the sac on to the cheek.

TREATMENT.

The medicine most likely to be beneficial in this disease is *Petroleum*. One drop of the first dilution night and morning.

A solution* of *Mer. Cor.* should be introduced into the sinus twice a-day, the matter having been previously squeezed out.

7.—OTITIS.

IN DOGS.

Inflammation of the ear is a painful disease which dogs are more liable than other animals to.

It may be known by the dog shaking his head and holding it on one side. There is much pain and tenderness when the affected ear is pressed upon during the necessary examination. The ear flap, also, is tender and swollen. There is a discharge, at first serous and scanty, afterwards purulent and copious, from the ear. The inflammation is probably limited to the external passage and as far as can be ascertained does not involve the inner ear.

When the discharge continues, the disease is called "internal canker" is established. This is in point of fact, "otorrhoea," symptomatic of chronic inflammation of the parts lining the external passage of the ear.

* See list of local applications.

TREATMENT.

Aconitum is indicated at the beginning of the disease when feverishness is present, and the passage is red and painful.

Belladonna is required when the pain is very severe, and attended with excitement.

Hephar Sulphuris is useful when the discharge has appeared.

Mercurius, or *Arsenicum*, is indicated in so-called canker.

DOSE.—2 to 5 drops every two or four hours.

The part should be kept thoroughly clean by being frequently bathed with tepid water.

*Borax Lotion** applied thrice a-day is of great service.

* See list of local applications.

CHAPTER XIV.

DISEASES OF THE SKIN

UNDER such nondescript names as “su
“mange,” and so on, are conveniently cl
together several entirely different skin di
incidental to the lower animals. These di
can be classified, with at least some approa
diagnostic accuracy, by following the arr
ment of human skin diseases into special gr

1.—PARASITIC DISEASES.

MAGGOTS IN SHEEP.—The large blow-fly
posits eggs on the sheep, during hot days in
mer, especially when the quarters and adja
parts are fouled from diarrhoea. Any woun
face is also a favourite place for such depa

The eggs in process of time are developed into myriads of maggots, which eat into the skin, and cause deep sores, and free matterly discharge. The animal becomes depressed, eats nothing, and sinks from exhaustion, unless properly cared for and treated.

The treatment consists in clipping off the wool from the soiled or injured parts which the fly attacks; in keeping it thoroughly clean; in feeding liberally to support the strength; in giving 5 drops of *Arsenicum* three times a-day; and in dressing the part with *Spirits of Tar*.

WARBLES.—This name is applied to the swelling so often met with on the skin of oxen, occasionally on that of the horse, from the gad-fly depositing its eggs in the skin; a tumour, often as large as a pigeon's egg, containing grubs and matter, being the result. The back and loins are the favourite places for the fly's operations. There may be several such swellings. During the process of depositing the eggs, the cow is in great fright, and scampers up and down the field in furious excitement.

The treatment consists in cutting into each tumour, squeezing out its contents, and afterwards applying *Sulphurous Acid* three or four times a-day. The grubs should be burnt.

TICKS.—These blood-sucking creatures the skin of horses, cattle, sheep, and dogs more especially injure ewes and lambs in

Dressing with olive-oil, and subsequently
ing with soft soap and water, are effectual
innocent measures.

FLEAS.—Fleas attack dogs and cats especially and excite severe itching and irritation of the

The animal should be dressed well with
parts of aniseed and olive-oil, and a few
afterwards thoroughly washed with soft soap
water. Dusting the skin with powdered soap
acre is often beneficial. The old bedding should
be burned, and fresh yellow deal shavings used

LICE.—Various species of lice infest the
of all the domesticated animals. Severe itching
is set up, to relieve which the animal scratches
himself until his skin is tender and sore. Dirt
and poverty are favourable for the development
of lice.

There is a peculiar skin disease, named *Phthiriasis*, sometimes met with amongst horses when
poultry are kept, from transmigration of a particu-
lar louse from the fowl to the horse. The
itching is so excessive, that the animal is com-
pelled to scratch himself until the skin is raw and
bleeding.

stantly rubbing himself, stamping the ground, kicking his belly, biting his skin, and altogether in a very sorry plight. In consequence of the scratching, the hair is rubbed off, and the denuded surface is covered with blood, or various kinds of eruption. This louse may visit the groom.

The treatment of lousiness consists in burning infected bedding and clothing; in washing harness and brushes in hot water; in attending to thorough cleanliness; and in dressing *every part* of the hide with olive-oil, or this failing, with *Sulphurous Acid*. The eruption caused by the lice either disappears of itself after they are killed, or may be readily cured by giving the usual doses of *Arsenicum* three times a-day.

SCABIES, ITCH, MANGE.—The disease bearing these names arises from an insect or mite which burrows in the skin, and induces severe irritation, followed by various eruptions.

Itch in the horse, according to the greatest authority, Gerlach, is excited by three species of insects, namely the *Sarcoptes Equi*, which burrows in the skin; the *Dermatodectes Equi*, which bites and fastens itself to the skin; and the *Symbiotes Equi*, which penetrates no further than the superficial layer of the skin. The first closely resembles the *Sarcoptes* of man, both in

its appearance, and in the general features of the eruption to which it gives rise. It can live on a man, and excite an eruption, which is identical with that of human itch, and which disappears spontaneously. Grooms attending "mangy" horses have been known to suffer from horse itch caused by the *S. Equi*. Cattle are affected by it, but experiments have failed in transmitting it to sheep, dogs, pigs and cats. The second parasite is the special itch of the horse, as, if transmitted to the skin of other animals, it speedily dies. In the horse it gives rise to itching, loss of hair, and a scurfy condition of the skin. The third is found in clusters especially about the horse's heels; the animal rubs one leg on the other, scratches with his feet, attempts to bite the part, &c., and the crusts of scurf form. It is also peculiar to the horse and cannot live on other species.

In oxen, two parasites are found, corresponding with the two last kinds mentioned above, affecting the horse, but they do not live on the latter.

In sheep, the parasite fastens itself on the skin and does not burrow at all—it is the *Dermatophagus ovis*, formerly called the *Sarcoptes ovis*. The disease it gives rise to is called the *Scab*, one that is most injurious to the good condition of a flock and difficult to eradicate, partly beca

it is communicated from diseased to healthy animals less by actual contact than by rubbing against walls or banks to which the parasite, or its nits adhere. This parasite is a most prolific creature.

In pigs and cats, the parasite is a burrower, and can live on the human skin.

In dogs, we find the *Sarcoptes canis*, which burrows and can live on man's skin, and the *Demodex folliculorum*, which resides in the sebaceous and hair follicles.

The *general symptoms* of the itch disease are as follows:—When the parasite attaches itself to the skin, or burrows beneath the surface, irritation is set up, and pimples or vesicles appear. The extent of the eruption and the violence of the itching sensation vary according to the number of parasites present, and the thickness or delicacy of the skin. From the same causes, a general efflorescence appears in the vicinity of the papules, giving the skin a red appearance, which is best observed where the integument has little colouring matter in its structure.

Papulæ are especially well marked on those breeds of dogs that have thick and comparatively unirritable skins. Presently, scales form, the hair falls off, the skin becomes infiltrated, thickened, and wrinkled; but there is no exudation on the surface.

The itching is the most distressing symptom ; slight at first when the acari are few and the irritation caused by their presence in the skin is bearable, but gradually increasing with the rapid multiplication of the parasites. The itchy sensation is at first confined to the spots where they are deposited, and are engaged in channeling the epidermis ; but subsequently the sensory nerves of the skin convey the sensation of universal itching, and the wretched animal spends his days and nights in rubbing, scratching, and nibbling himself.

In treatment, the object is to kill the parasites. First, clip off the hair or wool, and wash the whole body thoroughly with soft soap and warm water ; then dry the skin ; and, lastly, rub in *Benzine*. These applications may have to be repeated more than once ; but one thorough application is generally sufficient as far as the destruction of the parasites is concerned, and the remaining eruptions usually disappear without any treatment. *Sulphur ointment* is another good remedy ; washing being used as directed. The whole body should be subjected to these processes at the same time, because if one parasite escapes destruction, others will soon be bred.

The bedding should be burnt. The stable furniture and clothing should be thoroughly cleansed with soft soap and hot water.

VEGETABLE PARASITES. — The production of skin diseases in animals by low forms of vegetable life has not yet received that investigation which the interest and importance of the subject demand. It is, however, beyond doubt that our domestic animals are sometimes attacked with RING-WORM, and that grooms attending on horses suffering from it have contracted the same disease. The eruption consists of a greater or less number of patches on different parts of the skin, circular in shape, partially or wholly bare of hair, and dotted with vesicles. Scales form on the surface of these patches, and on removing them there is a slight moisture underneath. The hairs around are altered from their natural colour, and dusty.

There is a form of so-called "mange," which has been often observed where diseased straw has been used as bedding. A disease called "Camp Measles" has been observed in America in man, and has been ascribed to a fungus from diseased wheat straw.

The treatment consists in applying to the patches *Sulphurous Acid Lotion** three times a-day; in destroying infecting bedding; and in giving *Arsenicum* in the usual doses, three times a-day. Liberal food should be allowed.

* See list of local applications.

2.—ERYTHEMATOUS ERUPTIONS.

The skin diseases of this class are characterized by slight redness of the skin, raised in patches, and irregularly circumscribed, the redness (when it can be seen) disappearing on pressure, and instantly returning on the removal of pressure.

ERYTHEMA.—This occurs from friction between folds of skin, such as between the thighs, in the arm-pits, &c. The chafing of harness also causes it. Discharges running over the skin, as urine, may excite it. In dogs, the redness so often seen about the scrotum and inside the thighs is erythema. Hot weather, sweating, accumulations of dirt, favour this disease.

Another form arises mainly from pressure, as when horses are slung and when saddles and collars gall the skin of the back and shoulders. Hence the name *Saddle-gall*. When the pressure is continued, the skin in the middle of the injured part becomes hard and gristly, and in some cases is separated from the surrounding healthy skin by an ulcerated furrow. This is *Sitfast*.

Cracked Heels also belongs to this class. This very common disease of horses often arises from

not properly washing and drying the heel especially if the horse be afterwards let draughty place. It is very apt to come in frosty weather when the heels are not thoroughly dried, and also when poor horses are suddenly put on a liberal diet. The symptoms are sufficient. The animal is lame and in pain. One or more of the heels is found painful, hot and swollen. The skin cracks and fluid exudes. In bad or neglected cases, deep ulcerations form and the legs swell.

Chapped Teats in cows or ewes is like erythema.

When the disease arises from friction and irritating discharges, the part must be thoroughly cleansed with tepid water and well dried, then dusted with powdered starch, or fine earth. When the cause is pressure, the saddle or collar should be altered in such a way as to fit better, and *Arnica Lotion** applied frequently. In sitfast, the hardened skin may have to be cut out, in which case, the resulting wound should be dressed with *Calendula Lotion**; if not, apply *Arnica Lotion*. For cracked heels, trim the hair close to the skin, foment if there is pain, poultice with bran if there is pain and discharge, and if there is ulceration apply *Sulphurous Acid* at night and morning. At the same time, give

* See list of local applications.

drops of *Arsenicum*, or of *Sulphur*, three times a-day, and feed on mashes, boiled oats, hay, and carrots. Chapped teats will readily heal after a few applications of *Sulphurous Acid*, with a camel's hair pencil.

URTICARIA, or nettle-rash, known as "surfeit," is very common in horses, less so in oxen and other animals. It arises from indigestion, over-fatigue, and exposure to wet after a long journey. It is recognized by the sudden appearance of blotches, or elevations of the skin, varying in size from a sixpenny-piece to that of one's hand, on different parts of the body. There is considerable heat of the skin, and itching. In mild cases, the general health is not affected and the eruption does not continue long; whereas in others, there is some amount of feverishness, and the elevations are prone to reappear at intervals for some time.

The treatment consists in giving mashes, but no corn for a few days, and in giving *Aconite*, *Antimonium Crudum*, *Rhus*, or *Arsenicum*—the first medicine for feverishness; the second, when the disease is associated with indigestion; the third, when it is the result of cold; and the fourth, in obstinate, or relapsing cases.

Doses.—10 drops for horses and oxen, every three or six hours.

3.—PAPULAR ERUPTIONS.

LICHEN.—Pimplly eruptions are very c in horses. On stroking the skin with the of the fingers, especially over the neck, sho and hind-quarters, a lot of hard, gritty are felt. On scratching one of these p with the nail, we find that the top of it off as scurf. These pimples are as large hemp-seed; generally break out in spring; long duration and most difficult to cure. is usually some itching and rubbing. Irri and disorder of the stomach, drinking cold whilst the body is heated, and sudden exj to damp and cold, are the chief causes.

In treatment, *Nux Vomica*, or *Antimo Crudum* are required when there are sym of indigestion.

Belladonna is required in those cases of lar eruptions which are attended with he skin, some feverishness, and great itching. *senicum* proves of great service in all pa eruptions. *Sulphur*, also, is a valuable rem

DOSES.—10 drops for horses and oxen; 5 for a 2 to 5 for dogs—every four or six hours.

If there be reason to believe that parasite the cause of the eruption and itching, dress

Sulphur Ointment, or Sulphurous Acid Lotion,**
night and morning.

Attention must be paid to diet and exercise.

PRURIGO.—This disease is signalized by small pimples, heat of skin, and particularly by excessive itchiness. The horse rubs his neck, root of the tail, mane, against the wall, edge of the manger, or anything else, until the skin is red raw, and covered with small clots of blood. In some cases, the itching is intolerably severe, and the animal bites and rubs himself furiously. The legs are often mainly affected, and then he rubs one against the other, stamps impatiently, tries to nibble them, &c. Many of these cases depend upon a plethoric condition of the system, the result of over-feeding and want of exercise. Others are connected with the presence of parasites, and others are dependent on an excitation of the nerves distributed to the skin. In this latter case, there may be no primary eruption whatever, and those that arise secondarily are wholly due to rubbing and biting.

For treatment refer above to "Lichen."

* See list of local applications.

4.—VESICULAR ERUPTIONS.

ECZEMA.—This disease is most frequently met with amongst horses and dogs, the latter equally. I shall describe it as it occurs in the horse, premising that the general symptoms are pretty much the same in all animals. When fully developed, diseased patches, varying in size, irregularly circular, are observed on different parts of the body. On the surface of these inflamed patches are clusters of small vesicles, which a serous fluid exudes, which presently dries into scabs, and mats the hair together. In a few days the scabs and hair fall off, leaving the skin bare, inflamed, and moistened with exudation. Thin scales form from the drying of the exudation. There is usually considerable itching, violent scratching and rubbing from the irritation, in which case the diseased surface is covered with some small clots of blood, the result of slight laceration of the skin.

The so-called "acute mange" is ushered in by febrile symptoms, and is characterized by the inflamed and swollen state of the skin. The swollen, thickened state of the skin depends upon infiltration of serum into the meshes of the cutaneous structure. Vesicular and pustular eruptions

follow, and when these burst, the diseased surface presents the appearance of superficial ulceration. When the skin is very much inflamed and irritable, the disease is known as "red mange."

What is called "foul mange" is an aggravated form of the eczema above described. The skin is thickened, and exudes from its inflamed surface a large quantity of offensive serum or pus, or both; it is also chapped, wrinkled, cracked, and superficially ulcerated. The exudation forms thick, yellowish crusts. The hair falls off, partly from constant and vigorous scratching, partly from being detached by the exfoliating scales.

The disease may be localized in certain parts, such as the scrotum, the eyelids, the ears, the feet, &c. When the eyelids are affected, the case assumes all the characters of the ophthalmia tarsi of man, which is a true eczematous eruption. When the disease attacks the ears, it constitutes or introduces the so-called "canker" of that part. When seated between the toes and at the roots of the nails, the dog is lamed and the part is red, swollen, tender, and moist. Foul ulcerations are apt to follow, especially when the sanitary arrangements are bad, or the general health much impaired.

The puppies of mangy parents almost invari-

ably inherit the same disease. This mange—is eczema—is not catching. It is distinguished from parasitic mange, or itch, by the absence of the acari. Eczema is apt to return periodically and as it depends on constitutional cause its duration may be indefinite and its cure troublesome.

The best remedies are the following:—

Aconite is indicated for febrile symptoms, itching over the whole body, and especially at the scrotum, &c.; hot and burning skin; small reddish-coloured vesicles, with itching.

Rhus, for redness of the skin over the whole body; swelling of the skin, with an itchy eruption of small, yellowish vesicles, which run into pustules and become moist; a scurfy and fissured state of the skin; it is specially suitable when the eruption is situated on the scrotum, the eyelids, and the back.

Mercurius, for an eruption at first vesicular, afterwards pustular, which is sometimes dry, sometimes moist, and which itches worst under the influence of warmth.

Arsenicum, for burning heat and itching of the skin; scales, which peel off; reddish-coloured pustules, which break, and leave the appearance of small, shallow ulcers, with an ichorous discharge; painful blotches. It is likewise indicated for diarrhoea, debility, emaciation, enlargement

abdomen,—symptoms that supervene upon advanced eczema in dogs.

Doses.—10 drops for horses and oxen; 2 to 5 for dogs.

The diet must not consist of flesh, except in the case of weak puppies, or when the disease has induced marasmus and general debility. In all other cases, vegetable or farinaceous food is the most suitable; and even this should be given sparingly. The utmost cleanliness is required, and also good ventilation and moderate exercise in the open air.

The inflammation of the skin, and the consequent exudation and formation of crusts, is kept up by the constant scratching and rubbing in which the dog indulges as a relief to the itching sensation. It is consequently important to palliate this itching, as a step towards a radical cure, by lathering the skin every night with soft soap and warm water, and afterwards carefully drying.

I have found *Borax Lotion** of great use, applied several times a-day.

CASE OF ECZEMA.

On May 18, 1860, I went to Mr. F——'s farm to see another gentleman's horse. Mr. F——, pointing to a horse in a loose-box, said to me, "Look here, can you do anything for this horse?" On examining the

* See list of local applications.

horse, I found him covered with an eczematous eruption, scarcely an inch of his skin being free; in some places was rubbed raw and bleeding; it respects well. He has been in this state for summers, and what with the friction of the harness and the excessive itching when he perspired, no work has been got out of him. I prescribed drops of the third dilution of *Arsenicum* three times a-day. Two months afterwards he was quite well and worked through the summer without any of the old symptoms reappearing. He was sold at the end of the season, when I lost sight of him. Ever the eruption appeared, he was treated allopathically without the slightest benefit.

5.—PUSTULAR ERUPTIONS.

IMPETIGO.—The chief variety of this class of skin disease occurs in horses, and is called "Grease." It consists of inflammation of the skin at the back surface of the fetlock and is followed by the formation of pustules, or abscesses, the bursting of which there is a copious malodorous discharge.

This is an inherited disease—often "runs in the family." Coarse-bred horses and those with much hair on their legs are more subject to it than well-bred horses, the difference being probably due to better grooming and atten-

in the one than in the other. Exposure to damp and cold, and dirt, are the exciting causes. One form of grease depends on a specific contagious fluid.

A swelling appears in one or more legs, the hind more frequently than the fore; this swelling may extend as high as the knees, or hocks. The skin is hot, red, and painful, and the animal is more or less stiff and lame in his movements. In a short time, clusters of small vesicles arise on the skin at the heels containing a clear fluid, which, if it be specific, has the property, when inoculated on oxen and human beings of exciting an eruption like that of vaccine matter. If the fluid be not specific it has no such property. The vesicles subsequently become pustules, which contain matter. When these break there is a more or less copious discharge of an offensive character. This discharge mats the hairs together, and dries into scabs. Still later, the skin cracks into deep fissures, from which a matterly discharge issues. The leg above the heel is much swollen and painful, and the cracks may extend upwards. The diseased surface, in the most advanced stage, becomes covered with large unhealthy granulations, or "proud flesh," which from their appearance are known as "grapes." In the worst cases, what with the grapy condition of the leg, its considerable increase in size from swelling, the

copious and offensive discharge, and the last present, the animal is in a sorry plight and unpleasant to look at. In some cases, "cantharides" the foot is present as a consequence or complication, and in others of confirmed 'grease' the sites of the itch disease abound.

In the treatment of this disease, it is important to keep the part perfectly clean, washing night and morning with lukewarm water and glycerine or petroleum soap, afterwards drying thoroughly with a soft cloth. If there be much offensive discharge and inflammation, poultice with boiled carrots or turnips or liniment, and wash twice until the surface is clean. Mashes, clover and green food are useful as a change in the diet, and too much corn should be cut off. *Arsenicum* 10 drops, three times a-day will, aided by the above measures, often arrest the disease in its early stage, or prevent it from going on to the ulcerated and grapy condition. *Sulphurous Acid Lotion* should be used thrice daily as soon as the cracks appear, and especially if you suspect the presence of the itch parasite. In some cases, I have used *Arsenical Lotion** with good effects. The following case shows good results from another remedy:—

On April 2, 1860, I visited a pony belonging to Lady Frankland Russell of Chequer's Court, .

* See list of local applications.

bury. The pony, when bought two years and a-half since, had a slight running from the left hind heel. This has been gradually getting worse, in spite of the treatment of several veterinary surgeons, who have in vain applied the routine remedies. The disease is now above the fetlock joint, and involves the skin all around that part of the leg; the hairs stand up like the bristles of a hedgehog; an ichorous, offensive matter exudes freely; the pony is dead lame; the leg is much swollen.

Treatment. — The hair to be cut short; the part affected to be poulticed for a day or two, and then the following liniment to be applied with a soft brush, night and morning—viz., *Kali Chloricum* $\frac{1}{2}$ oz., glycerine 12 oz. To have internally, *Kali Chloricum*, 10 drops night and morning. This treatment was pursued for a few weeks, when the leg was quite cured, the pony working all the time on dirty roads.

When I write, eighteen months after the above date, the disease had not returned; and no one can tell which leg was affected.*

WARTS.—One of the best local applications is strong tincture of *Thuja*, put on with a camel's hair pencil night and morning, and steadily persevered with. The best internal remedies are *Thuja* and *Calcarea Carbonica*—10 drops for horses and oxen, 2 to 5 for dogs, night and morning.

* Quoted from my "Practical Reply," &c.

MALLENDERS is the common name for a scaly or scaly disease (psoriasis) situate on the back part of the bend of the knee. **SALLERS** is the same at the front of the bend of the hock. Both attack horses only.

In treatment, after softening the scales with warm water and soap, apply *Thuja* night and morning, and give *Arsenicum*, or *Thuja*, in drop doses at the same times.

CHAPTER XV.

ERUPTIVE FEVERS.

THESE diseases are attended with general fever and a special eruption on the skin. They comprise, in the lower animals, erysipelas, measles, scarlatina, cow-pox, and small-pox.

1.—ERYSIPELAS.

IN ALL ANIMALS.

Erysipelas occurs in all animals, but most frequently in dogs and sheep. In horses, it sometimes supervenes upon cracked heels. In sheep, it has been known to follow an injury of the skin inflicted during shearing.

The animal is more or less feverish—the being quickened, the appetite impaired, the tions checked, the mouth hot and dry, &c. skin is covered with a diffused redness and to the touch. The areolar tissue under the is likewise involved, giving rise to a swollen condition of the inflamed part. On the day of the inflammation the skin peels off in scales.

TREATMENT.

Belladonna and *Rhus*, given in alternation, are the best remedies, and in the majority of cases render the use of other medicines unnecessary.

DOSES.—10 drops for horses and cows ; 5 for
and pigs ; 2 to 5 for dogs—every four hours.

2.—MEASLES.

IN PIG AND SHEEP.

By measles in pigs is meant, not the parasitic disease in which undeveloped tape-worms lodge in the muscles and give rise to what is known as “measly pork,” but a fever, attended with catarrhal symptoms, and a rash on the skin. The animal coughs and vomits ; the eyes are red

there is a copious flow of tears; and a watery discharge runs from the nose. The pulse is quickened; the skin hot and dry, and the appetite impaired. Then an eruption appears on different parts of the body, especially on the inner surface of the legs, about the arm-pits, &c., consisting of a multitude of small red pimples. When the eruption fades, the inflamed skin peels off in small, branny scales. Diarrhœa, or bronchitis are apt to arise as complications.

A similar disease has been described by some continental veterinarians as occurring in sheep.

TREATMENT.

Aconite is required for quick pulse, hot, dry skin, thirst, restlessness, &c.

Pulsatilla should be given as soon as the rash appears, and when there are—hoarse cough, and running from the nose and eyes.

Arsenicum is required in those cases which manifest a tendency for the skin to slough in patches, and when diarrhœa, or prostration sets in.

If there are symptoms of bronchitis, treat as directed at page 230.

DOSES.—10 drops for sheep and pigs, every three hours.

3.—SCARLATINA.

Horses sometimes present symptoms analogous to those of human scarlet fever. They become feverish, the pulse being 60 or higher, and breathing 20, or upwards. The throat is also some difficulty and pain in swallowing. Throat symptoms vary in severity in different cases. The glands about the throat are more or less painful, hot, and swollen, and there is a troublesome throat cough. If the nose is examined, we shall discover on the nasal membrane a number of scarlet spots of different sizes, which gradually run together and form red patches. A similar eruption is also found on the inner membrane of the lips, and on the skin where ever white hair enables one to see it. There is a sloughing in the nose at the site of the eruption, as is the case with the purple petechiæ of *pura hæmorrhagica*. When the disease is on the decline, there is a copious shedding of scales. Blotches and elevations of the skin have been described by some writers, but they do not occur in genuine cases of scarlatina. After the disease has continued some days, and the horse appears to be doing well, a swelling, which on pressure, suddenly appears under the

gradually extending forwards to the breast and backwards to the prepuce, and also filling one or more legs. Recovery is the usual termination, unless "heroic" treatment is applied, or the disease attacks a worn-out animal.

TREATMENT.

In mild cases of the disease nothing more is required than to turn the horse into a loose-box, feed him on mashes for a few days, and give 10 drops of *Belladonna* every four hours. If the cough is troublesome, the throat sore, and painful, and swollen, give the *Belladonna* alternately with the same dose of *Mercurius*, every two or three hours. When the fever runs high at the onset of the disease, it may be necessary to give *Aconite*, alone or alternately with *Belladonna*. When swellings appear in the legs, and under the belly, and the urine is scanty, give *Arsenicum*, 10 drops, four times a-day.

4.—VARIOLA.

IN ALL ANIMALS.

Variola is equivalent to small-pox in man. Horses, oxen, sheep, dogs, and pigs are subject to variolous diseases. Horses are affected in the

lips, but especially in the heels, the attack in the latter region being undistinguishable in external features from common grease. If, however, the matter in the vesicle be inoculated on a cow's udder it will give rise to cow-pox, and if on a child's arm the well-known eruption, like that of vaccination.

In cows, the eruption appears on the udder, first as red, circumscribed, hard pimples, which gradually increase in size, until they become vesicles, filled with a clear fluid and surrounded by a red ring. Later, the vesicles contain matter; they break, and the matter dries into scabs, which fall off. Some amount of fever is present. It is from these vesicles that vaccine lymph for vaccination is obtained.

In sheep, the disease is highly contagious, infectious, and destructive to a flock. After a few days of incubation, during which the animal is dull and off its feed, small red pimples appear, which grow larger and flat, and at first contain a clear fluid, subsequently matter. Then the pustule breaks, and the escaped fluid dries into a scab, grey or brown in colour, which presently drops off. The attendant fever runs high. Discharge from the nose and eyes, hurried breathing, lividity of the membranes of the mouth and nose, and offensive smell of the skin, are frequently observed in ordinary cases. In malignant cases

the vesicles contain bloody serum, and gas is developed under the skin; or death takes place suddenly before any rash appears; or the air, or food tube is seriously implicated from the eruption appearing in one or other of them. The average duration is about three weeks. Sloughing of the skin in patches, or of the feet or hoofs, is a not unfrequent consequence.

IN DOGS.

This disease, which is much more common on the continent than in this country, has been fairly described by Barrier and Leblanc.

At first, the animal is dull and depressed, and carries his head drooped; the eyelids are half-closed, and the eyes vacant in expression; the nose is hot and dry; the tongue furred; the dog prefers to lie down, and when induced or compelled to get up and walk, the pace is slow and unsteady; the bowels are confined and the urine high coloured; the pulse is somewhat accelerated; and there are occasional, or frequent vomitings. Sooner or later, diarrhoea comes on. The evacuations are bilious, dark, and offensive; the countenance is expressive of anxiety and uneasiness; and there are evident indications of prostration. Four or five days from the onset, after shivering, *vesicles* appear on the head, and thence gradually

spread to the other parts of the body; vesicles subsequently break, and the rest of the scab falls off in due course.

A pack of hounds ate the carcasses of sheep, dead of *clavelée* (small-pox). Seventy of them became ill. At first, distemper was expected, as the dogs were low-spirited, weak, tremulous in their limbs, and had a viscid, greenish discharge from the nostrils. A copious crop of "pustules" appeared, and the disease was then taken after rightly or wrongly, regarded as small-pox. Eleven died.

It has been stated that some dogs were infected from sheep with this disease during the recent Wiltshire epidemic; and that in both animals the disease was identical in its symptoms.

In small-pox, the skin is affected in the following manner:—The skin of the belly, groin, &c. is redder than usual, and dotted with small, round spots, either isolated, or irregularly clustered together. Each spot gradually gets larger, and the centre becomes prominent and pointed, and contains a clear fluid, which subsequently acquires a pus-like appearance. Each spot is now flattened. The contained fluid escapes on the rupture of the envelope; scabs form from the drying of the fluid, and gradually fall off. In some parts of the body, a permanent minute scar remains after the hair is destroyed for good.

TREATMENT.

The horse and cow-pox are so mild as to require no special treatment. When sheep-pox breaks out in a flock the diseased should be separated from the healthy, and the latter inoculated. They will then have the disease in a milder, more manageable, and less fatal form than if they had become affected by contagion, or infection, in the ordinary way. If it be resolved to place the diseased sheep under treatment they should be carefully isolated during the illness and for sometime afterwards, great attention should be paid to ventilation and cleanliness, and only soft food and plenty of water should be given.

Aconite should be given when there is feverishness.

Antimonium Tartaricum is indicated throughout the whole course of the disease, not only for the eruption, but for the lung symptoms so frequently present.

Arsenicum is useful for symptoms of prostration, for purging, and for tendency to sloughing.

DOSES.—5 drops for sheep, and 2 to 5 for dogs, every two hours.

CHAPTER XVI.

CARBUNCULAR DISEASES

THE diseases of this class depend upon development of a poisonous animal principle within the body of several of our domestic animals, and are characterized by the existence of a fever of a low or malignant type, and, in some forms, by a local lesion of the nature of a carbuncle.

They all arise from rankness or poverty of pasturage, exposure to damp or cold, and from unascertained local causes. They attack both eating animals, and are communicated to others by contagion or inoculation, and have often prevailed as epizootics on the Continent of Europe. They are most severe in full-blooded animals, and frequently follow a change from poor to rich diet.

True carbuncular diseases of animals are communicable to man by contact with diseased

horn, bones, blood, and flesh, and by flies and other insects carrying the poisonous matter from an infected animal's carcase to man. The disease is known in human medicine as "Malignant Pustule." The use of diseased flesh and milk as food does not appear to injure man, but the evidence on this point is rather conflicting.

The following are the most common forms:—

1. GLOSS-ANTHRAX, which the reader will find described at page 57, as it occurs in oxen, sheep, and pigs.

2. SPLENIC APOPLEXY, which is described at page 168. Whilst some authorities regard this as a veritable carbuncular fever without external local lesions, others look upon it as non-specific congestion of the spleen.

3. BRAXY IN SHEEP.—This is a very common and fatal disease amongst sheep, especially in mountainous districts, and in others when the food is changed to turnips, &c., in winter. Amongst shepherds the term "braxy" is as non-descript as that of "the epidemic," "the distemper." Some mean by it an attack of diarrhoea, or of inflammation of the bowels, without any specific poison in the case. Properly speaking, it should be understood as designating a blood-disease, which suddenly attacks one or more sheep, particularly in frosty weather, and proves *fatal in a few hours*. The most usual symptoms

are, in the early stage, staggering gait, tumbling forwards or backwards, hard, dry dung, scanty, dark urine, with difficulty in passing it. The eyes are found to be red, the mouth hot and dry, the pulse quick and bounding, the breathing laboured and panting, and the skin hot. Then the animal becomes weak, and drops down and rolls on its back, and soon dies. In some cases before death, gas is generated under the skin, a crackling noise is heard when the hand is passed over the back; in others, the paunch is distended with food and gas, giving rise to a swelling on the left side. After death, rapid decomposition sets in.

In treatment, very little can be done except at the very earliest part of the attack. It has been recommended to cause the animal to move about briskly. It should be put into a warm place, and have hot gruel drenched down in small quantities. Warm water injections are useful when there appears to be irritation or pain in the belly, and the fæces are hard. When the paunch is much distended with gas, perforating it with the trocar may be necessary. In such cases give *Nux Vomica* and *Ammonium Causticum* in 5-drop doses every hour, until there is improvement, and then every two or three hours. When symptoms of prostration appear give *Arsenicum*, or *Rhus*, in the same way. Should recovery take place

great care as to diet must be taken for some days. For the prevention of the disease, sheep should have the means of shelter on the hills, and should not be suddenly put on a rich pasturage.

4. BLACK QUARTER. — This form is likewise called *inflammatory fever*, *quarter-evil*, *joint-murrain*, *black-leg*. It affects both oxen and sheep, and is widely spread in this and other countries. The young are more subject to it than the old.

When the disease is fully developed, there are symptoms of high febrile excitement, such as quick, full pulse, hurried breathing, outstretched head, bloodshot eyes, hot mouth, loss of appetite, moaning, anxious countenance, &c. The animal is lame on a fore or hind leg. There is, on some part of the body—on the quarters or about the joints—a painful swelling, which causes the animal to be dead lame, or very loth to move. The back and loins are exquisitely tender to the touch. Swellings appear about the back, shoulders, and loins, crackling when pressed upon, due to decomposition of the tissues and the generation of gas. The skin in patches becomes hard and dry, and subsequently sloughs off, leaving an ugly, unhealthy sore which discharges offensive matter. At the same time, the mouth and tongue become ulcerated, and a stinking, bloody fluid drops from the

nose and mouth. Diarrhœa sets in, and animal dies from exhaustion.

This disease may be prevented by placing stock in sheltered, comfortable quarters, care avoiding over-crowding, imperfect ventilation and accumulations of excrement. Linseed good hay, turnips, and salted water should be diet.

The medical treatment has little chance of succeeding, chiefly in consequence of the virulence and great rapidity of the malady. Bleeding and all varieties of severe measures, are worse useless.

In my opinion, the following are the best remedies:—*Ammonium Causticum* when the breathing is quick and heaving; the nostrils expanded, the muzzle dry, &c.

Aconite may prove useful when the pulse is full and bounding, and when symptoms of inflammation as above detailed are present.

Belladonna and *Rhus*, in alternation, as soon as the local swellings appear.

Mercurius and *Belladonna*, in alternation, when the mouth and tongue are severely ulcerated, and there is a copious discharge of saliva, or of bloody fluid.

Arsenicum is required for symptoms of putrefaction, and for diarrhœa.

The principal swellings should be formed

and the sores which remain after the sloughs have fallen off, dressed with *Sulphurous Acid* three or four times a-day. The same may be applied to the mouth and tongue when ulcerated.

DOSES.—10 drops for oxen; 5 for sheep. Repeat each dose every one or two hours, according to the violence of the symptoms.

5. CARBUNCULAR DISEASES IN PIG.—One form is analogous to the gloss-anthrax of cattle and sheep. The reader will find a description of it at page 58. The second form is described at page 78. The third form, believed to belong to the anthrax family, is commonly known as the “blue disease,” “distemper in pigs,” “hog cholera,” &c. It begins with dullness, loss of appetite, holding the head low; then, the animal lies on its belly and evidently suffers from pain there. Retching or vomiting of food, bile, or mucus is a common symptom. In some cases, we observe drowsiness; in others delirium. The skin, especially about the back, belly, inside of the legs, is of a blue, or purplish colour. Symptoms of paralysis of the hind legs appear; the surface becomes cold; and death may take place in a few hours.

In this disease, give *Belladonna* when the animal is excited, in pain from colic, and when the rash comes out. *Rhus* is also good when the rash appears and there are symptoms of prostration.

Arsenicum for diarrhoea and exhaustion, the paralysis, *Rhus* or *Belladonna*.

Doses.—5 drops every one or two hours, according to the violence of the symptoms.

The means of preventing these form disease amongst pigs comprise, thorough cleanliness, removal of filth, clean bedding, sluicing body with cold water, allowing exercise, and admitting fresh air. Sound food of both vegetable and animal nature should alone be given. When the disease breaks out in a lot, the animals should not be congregated together.

CHAPTER XVII.

WOUNDS AND INJURIES.

1.—INCISED WOUNDS.

INCISED wounds are produced by cutting instruments, such as knives, scythes, &c.

In treating a wound, the first thing to do is to stop bleeding. This may be done by exposing the wound to the atmosphere, by pressure with the finger, or a compress of lint bound down by a bandage, by the application of cold water, &c. These means will always succeed, unless the hæmorrhage proceed from a wounded artery of considerable size. In such a case as this, firm and constant pressure is the immediate, and a ligature the radical remedy.

The second thing to do is, to remove all foreign bodies from the wound, such as clots of blood, dirt, splinters, thorns, by means of the fingers, or

forceps, or affusion with water. No wound heal whilst these substances remain in it.

In the third place, the sides of the wound should be brought together and kept there. The hair should be closely clipped away from the skin near the edges of the wound. Then, when the sides of the wound are held together, a thin layer of *Collodion* should be applied by means of a camel's hair pencil. This substance forms a thick film, under which the wound heals.

When the wound is larger or deeper, *Collodion* is not sufficient, and stitches may be necessary. Pass a strong needle, armed with silk or hen thread previously well waxed, through one side of the wound, from without inwards, then through the opposite point of the other side from without outwards. The thread is then to be tied, without unduly straining the parts, and the ends clipped closely off. Other stitches are to be put in the same manner, at about the distance of half an inch, until the whole extent of the wound is accurately sewn up. A piece of lint, saturated with *Arnica Lotion*,* and constantly kept moist may then be placed over the wound and kept there by a bandage. In flesh wounds, with tearing and loss of substance, as well as a pure laceration, apply *Calendula Lotion*.* The stitches should be removed as soon as the sides of the wound

* See list of local applications.

firmly adherent, and also when the wound becomes inflamed. In this latter event, poultices may have to be applied for a day or two, but usually *Calendula Lotion*, and *Aconite* internally, in the usual doses for different animals, every three hours, will supersede the necessity for poulticing.

2.—BROKEN KNEES.

Injuries to the knees consequent upon the horse falling upon this part, vary in extent and severity. For the purpose of illustration, they may be grouped into three classes:—

1. Those which consist of simple bruises, without perforation of the skin. The knee is hot, painful, and swollen; some hair is removed and the skin somewhat grazed. 2. Those in which the skin is cut through, torn, and jagged, and the tissues underneath more or less injured. 3. Those in which the knee is cut, bruised, lacerated, and pulpified, and the knee-joint open into as well. This last accident is known by the escape of clear fluid, like white of egg. The injury is often so severe as to cause death, or to necessitate the destruction of the animal.

TREATMENT.

The treatment consists in the first class of cases in washing the knee to remove dirt, and in frequently applying *Arnica Lotion*.* In the second class, wash to remove dirt and blood, adjust cut and torn skin as accurately as possible, and apply the same lotion. Give internally 10 drops of *Arnica* three times a-day, and *Aconite* in the same way if there is any feverishness. [In severe injuries some inflammation will generally arise at the injured knee; the tissues ground down by the force of the fall will slough off; the wound will heal from the bottom, leaving necessarily, a permanent blemish of greater or less extent. Here, hot fomentations and linseed poultices, medicated with *Calendula Lotion** are required. When the inflammation in the wound is fairly gone, nothing more is required but the last lotion. When the knee-joint is open, treatment as directed below.

3.—OPEN JOINT.

This serious accident most frequently befalls the knee, hock, stifle, and pastern joints, and is caused by falls, kicks, stabs with a nail, or other penetrating body, &c.

* See list of local applications.

It is characterized by a flow of synovia (joint-oil) through the wound. This fluid in appearance and feel is not unlike white of egg. Severe pain, and more or less irritative fever, varying with the size of the wound, and the importance of the joint injured, supervene. If, as sometimes happens, the interior of the joint becomes severely inflamed, the horse may die, or he may have to be destroyed; or tetanus may ensue.

TREATMENT.

In treatment, the first bar to recovery lies in the impossibility of keeping a horse quiet, and therefore, in keeping the joint perfectly motionless—rest being, in such cases, of incalculable aid; and the second lies in the condition of the wound itself, which cannot close and heal up, so long as a fluid is constantly running through its sides. When the wound is a large one, or when it implicates a large joint, such as the stifle, the horse must be slung. If there is much pain and feverishness, give 10 drops of *Aconite*, every three hours; if not, *Arnica* in the same way. When the flow of joint-oil is considerable, give *Silicea* in the same doses. According to my experience the best local application, one that is absolutely indispensable, is fresh *slaked lime*, very finely powdered. Lift some of it on the handle-end of a spoon, and apply it directly to the wound at

the point where the fluid is escaping, and press it on with slight force. One attendant must wait on the horse during the day, another during the night, and *whenever* any oozing is seen, a fresh application of the powder must be made to the point of issue. The lime and the oil form a thick, hard, adhesive crust which, in course of time, if assiduously added to stops the running and allows the wound to close. None of the old crust should be removed until the discharge is completely arrested, but the fresh application must be made on the top of the old. From considerable experience of this treatment, I strongly recommend it. Even very bad cases should not be given up. The great point is, repeated applications night and day whenever the oil makes its appearance. *Silicea* should be continued from first to last; but alone it can do but little.

In opened knee-joint, it is possible to keep the leg in comparative rest, by fixing on a good percha splint, four inches broad and twelve long. Dip it in hot water to soften it; then fit it to the inequalities of the back of the leg, and secure it by a bandage encircling the leg above and below the knee.

4.—POLL EVIL.

This disease, as the name implies, is situated at the juncture of the neck with the skull, which are connected together by a strong elastic ligament, commonly called the pack-wax. Poll-evil is at first merely a bruise, inflicted by the horse striking the top of his head against a door-way, or the top of a low-roofed stable; often, it is to be feared, the result of a brutal driver hitting that part with a stick, or the butt-end of a whip.

The seat of injury is very tender, hot, and swollen; the slightest touch causes the horse to flinch, and he is very reluctant to move it, and may be seen hanging his head, resting on the manger. If the case be neglected, the appetite fails, there is evidently greater pain, and the tissues under and about the pack-wax become inflamed. Matter soon forms, and, as there is no easy vent for it through such resisting structures to the skin, it burrows deeply and widely in all directions amongst the ligaments and may even set up disease in the bones themselves. It may eventually, if let alone, come to the surface and the ABSCESS burst, to the animal's great relief.

TREATMENT.

The treatment, in the first instance, is to three or four folds of cotton kept constantly damp with *Arnica Lotion*,* giving at the time *Arnica* and *Belladonna*, 10-drop every three hours alternately. The horse should rest, or, if this is impracticable, the head should be eased in its bearings on the poll; the driver should take care not to jerk the head about. Night and morning, the part should be thoroughly fomented with hot water. If these means should fail, it may be assumed that the formation of matter cannot be prevented, the next step is to make a free incision into the abscess, so as to allow the matter to escape and to make an independent opening at the lowest part. If the matter has already formed, the channels which it has made are called *FISTULA*, or, in farriers' language, *pipes*. These also must be laid open with the knife. Between the place of the incision and the lips of the wound, thus made so that they may not close too soon. When matter is formed, and when it is discharging freely, give 10 drops of *Hepar Sulphuris* four times a-day; and, in chronic cases, when it is desirable to quicken the healing process, give *Silicea* in the same way.

As a local application for fistula, under which

* See list of local applications.

ever circumstances, and in whatever region they may arise, inject *Mercurius Corrosivus Lotion*,* two or three times a-day, stopping up the counter-opening with the point of the finger, during the process, in order that the fluid may permeate through devious ways. Diseased bone should be scraped.

When the bones are diseased, the cure is always tedious, and recovery may take place with a permanent adhesion which prevents free movement of the head.

5.—FISTULOUS WITHERS.

Beginning with a bruise from the pressure of an ill-fitting saddle, and ending in abscess, and fistula, this injury presents exactly the same general symptoms as poll evil, runs the same course, and requires precisely the same treatment.

6.—BONY ENLARGEMENTS.

NODES.—A kick, or other blow, on the shank bone of a hind or a fore leg, gives rise to severe pain, heat, and swelling. The membrane (peri-

* See list of local applications.

osteum) covering the bone inflames and thickens, and a deposit of osseous matter takes place. Constitutional causes, apart from any injury, likewise induce such swellings.

BONE-SPAVIN.—This is a small, hard swelling caused by bony deposit, situated at the lower part of the hock at the inner side. Usually, at an earlier stage at least, there is more or less constitutional lameness, as well as tenderness to the touch, heat, and swelling. At a later period, it interferes with the hinge-like joint of the hock, and interferes with its free movement. In some chronic cases the lameness attending spavin disappears during exercise, from a special part of the articulation being affected, whilst free movement remains between the tibia and astragalus. A predisposition to make of hock, and hereditary predisposition favour the development of spavin; whilst, in some cases, caused in other animals without any such predisposition, by overwork and excessive strain upon the joint, especially in early life.

Except in very confirmed cases, it is possible to remove spavin and its accompanying lameness without resorting to painful or disfiguring measures by remedies mentioned below, which I have often tried and found successful.

SPLINT.—The bony tumour thus named is situated between the shank bone and the splint bone, and is situated alongside the shank bone between

knee and fetlock, and it usually appears on the inside of a fore leg. Sometimes there is a splint on the outside. According to its position, size, and extent, it may, or may not cause lameness. If it be situated near the knee-joint, or interfere with the free movement of a sinew, it causes lameness. It then, and only then, constitutes legal unsoundness.

SIDE-BONE.—This consists of a deposit of bony matter into the side cartilages, at the back part and outside or inside of the coronet, just above the hoof. It is usually confined to the fore legs.

RING-BONE.—This is a bony enlargement on the pastern bone, immediately above the coronet, extending in some cases so much as to produce anchylosis of the pastern, or coffin-joints—a condition in which the opposed surfaces of the articulation are surrounded and immoveably locked together by bony deposit. Ring-bone is most frequent on the hind legs, and there is usually “side-bone” as well. Ring-bone and side-bone, no matter how small, and whether they cause lameness or not, constitute unsoundness in the law’s eye.

TREATMENT.

The treatment of all bony enlargements is the same. The frequent application of *Arnica Lotion*,* and the internal administration of 10

* See list of local applications.

drops of *Arnica* three times a-day is the proper treatment for such swellings soon after the infliction of the injury. When the swelling is local to the touch and bony in nature, give 10 drops of *Mercurius Corrosivus* three times a-day, rub in, night and morning, *Mercurius Corrosivus Lotion** until the skin becomes tender and scurfy; then desist for two or three days and repeat as before—continuing in this manner until the enlargement disappears.

The following cases, reprinted from my "Practical Reply to Sir B. Brodie's Letter," illustrate two of the diseases described above:—

CASE I.—SPAVIN.

February 12th, 1861.—A horse belonging to Dudley de Ros, is said to be lame in the fetlock joint. On examination I find lameness of right hind leg; slight enlargement at the spavin place of hock, with tenderness and pain on pressure. I ordered this part to be rubbed, night and morning, with the *Merc. Cor. Lot.* and 10 drops of the sixth dilution of *Merc. Cor.* to be given night and morning. In a month he was sound and went to work.

CASE II.—INCIPIENT RING-BONE.

On July 14th, 1860, I visited, by the recommendation of Lady F. Russell, a carriage-mare belonging to Col. Ashley. She has been examined by Messrs. Mavor, who pronounce the lameness to arise from disease of the knee-joint, and recommend the mare

* See list of local applications.

be sent to the farm, and have repeated blisters applied to the knee. I found that the lameness was clearly due to incipient ring-bone, and the result of the treatment confirmed this diagnosis.

Symptoms.—Lame on the right fore leg; slight enlargement round pastern joint, with heat and pain on pressure.

Treatment.—A lotion of *Merc. Cor.* was applied night and morning, and *Merc. Cor.* sixth dilution, 10 drops, given twice daily; she was sound in a fortnight. Twelve months after I had a letter from Lady Frankland Russell, saying the mare remained quite sound.

7.—BURSAL ENLARGEMENTS.

A bursa is a small bag containing a fluid, and the use of it is to prevent friction where a tendon runs upon a bone. When a horse is overworked, too early worked, or the tendon is sprained, or the bursa itself directly injured by a blow, or kick, slight inflammation arises, the part becomes hot and tender, and a swelling, sometimes small, sometimes large, arises in consequence of increased secretion of mucus into the sac. There are several special varieties, including the following:—

THOROUGH-PIN, which is situated on both sides of the hock, in the form of a round swelling,

often of considerable size, but seldom cause lameness.

WIND-GALLS, which are found above and sides of the fetlock joint. Except when or hard, they do not cause stiff action or lameness, but they are unsightly, and ought to be attended to.

BOG-SPAVIN is a bursal swelling, situated side the bend of the hock, often of considerable size. This swelling if large obstructs the flow of blood from a vein which passes over the bursa; the vein is distended with blood—and the swelling thus caused is named *Blood-Spavin*.

TREATMENT.

The treatment of all the foregoing injuries is substantially the same. At first, rub the part thoroughly three times a-day with *Arnica tincture*,* and give 10 drops of *Arnica* thrice a-day. At a later period, when there is more or less copious effusion use *Rhus Lotion*,* and Rub the part the same way. Should this fail, which it rarely does, or if the swelling be tense or callous use *Mercurius Corrosivus Lotion*.* and *Merc.* inwardly as directed for "nodes," page 383.

* See list of local applications.

8.—CAPPED HOCKS, ETC.

CAPPED HOCKS is a swelling on the point of the hock, best seen when looked at sideways, caused generally by the horse kicking in harness, or in the stable, or by any other mode of injury. It may be a true bursal enlargement; in which case the swelling is at the sides of the point of the hock; most frequently it consists of effusion of a serous fluid under the skin, with thickening of the skin itself. The swelling often becomes hard and difficult to remove.

CAPPED ELBOW.—This enlargement is of the same nature as capped hock, and is caused by the heel of the shoe injuring the point of the elbow when the horse lies down. Sometimes it ends in ABSCESS.

In treatment, rub in *Arnica Lotion** three times a-day and give *Arnica*, 10 drops thrice daily. For subsequent hardening, use *Mercurius Corrosivus Lotion*,* and *Merc. Cor.* thrice a-day.

9.—SPRAINS.

A sprain may be defined to be an injury of the ligaments and adjacent structures of a joint, or of a single tendon, the result of over-extension.

* See list of local applications.

A sprain may vary in severity and consequence from a slight strain upon these structures, requiring little or no treatment, up to a fatal remediable lesion. Local pain and swelling, lameness or inability to move, and perhaps a degree of feverish excitement, are the general symptoms. The following are the principal individual accidents of this kind :—

SPRAIN OF THE NECK.—This occurs when a horse falls upon his head, as in hunting. It may be displacement of bones with twist of the head and neck; or concussion or laceration of the spinal cord, attended or followed by paralysis; or simple sprain of the tendons and ligamentous structures.

SPRAIN OF THE BACK occurs when a horse slips in the field, or on ice, and attempts to recover himself; or when the hind feet slip backwards, as in jumping. Severe injuries in this quarter may involve important parts as far beyond the reach of art; or the sprain may be observable till the animal has rested.

SPRAIN OF THE SHOULDER occurs from a fall, and is characterized by reluctance to move the limb, extension of the leg forward, dragging the toe along the ground and slightly swinging it round when walking, with local tenderness under pressure, and usually with some heat and swelling. When the lame leg is raised we

and pulled out in front of the horse in a straight line, it is evident that more or less pain is caused.

SPRAIN OF THE HIP is known by lameness, difficulty in moving the leg forwards, and local heat, tenderness, and swelling.

SPRAIN OF THE STIFLE is known by dragging of the leg, and the same local symptoms as the last. The patella—or bone in front of the stifle joint—may be dislocated, in which case the leg is dragged along, stiff, and immovable. Drawing the leg forcibly forwards and pressing the bone into its place, will remedy this displacement. SPASM, or cramp of the leg, gives rise to similar symptoms; it comes and goes suddenly.

CURB is an enlargement at the back of the hock, about three or four inches below the point of the hock, and consists of sprain, followed by swelling and thickening of the ligament which binds the os calcis and metatarsal bones together. It is seen at a glance, by looking at the hock from the side. A horse galloping over stiff ground, or put to a sudden spring, as in a start or jump, may “throw out” a curb. Young horses are especially the subjects of it. Horses are called *cow-hocked*, or *curby-hocked*, when the joint is malformed in such a manner as to render them more than ordinarily liable to curb from the

ligament being kept constantly on the stretch horse with curb is unsound, but a curby-horse not lame at the time of sale is sound. A horse that throws out a curb within an hour after sale cannot be returned to the vendor.

SPRAIN OF THE BACK TENDONS, a frequent accident to the fore-leg, is attended with some lameness at the time of injury, or the lameness perceptible only after the horse has rested. There is pain, heat, and swelling in some part of the tendon, between the pastern and knee. The horse rests his leg on the toe, and is afraid to throw the foot down flat. In bad, or neglected cases, the condition known as *thickening of the sinews*, remains.

BROKEN DOWN expresses rupture of the suspensory ligament and of the perforating flexor of the foot—a serious accident which occurs suddenly to one leg, rarely to both, when the horse is galloping at full speed. He stops like a shot or falls down—hence the name—and we find him resting on the fetlock, with the toe turned up and the sole of the foot forwards.

TREATMENT.

The treatment of all the above varieties of sprain is the same. They all demand absolute rest at least until pain and swelling are marked.

less, and the lameness trivial. Even then work is out of the question—gentle exercise is alone advisable. On this point great care and judgment are required. In sprain of the back tendon a high-heeled shoe should be put on, and kept on, until it is no longer needed.

In the first stage of sprains, give *Arnica*, in 10-drop doses, every three, four, six, or eight hours according to the severity of the injury, increasing the interval between the doses with the improvement. The best application is *Arnica Lotion*,* which should be well rubbed into the injured part at least three times a-day, or, when it can be done, applied constantly by wetting a piece of lint or cotton, covered with a dry cloth. In sprains of the leg, a bandage damped with the lotion, and kept damp, should be wrapped round. In the majority of cases this treatment will be successful. But if some swelling should still remain, substitute *Rhus Lotion*,* and *Rhus*, using the former and giving the latter as directed above for *Arnica*. In chronic thickening of tendons, or the sheaths of tendons, or of the structures around a joint, consequent on severe, or neglected sprains, have recourse to *Mercurius Corrosivus Lotion*,* and *Merc. Cor.* as directed for “nodes” at page 383.

* See list of local applications.

The following cases* illustrate the symptoms and treatment of sprains :—

CASE I.—SPRAIN OF THE FLEXOR TENDON

On May 5th, 1860, I visited a carriage-horse belonging to B. Green, Esq. The animal is a fine horse, but rather defective in his fore legs. A few days ago he became lame of the fore right leg, and was sent to a veterinary surgeon, who recommended firing and blistering, and rest for three months. The owner objected to such severe measures, and I took his horse under my care.

Symptoms.—Lameness of the right fore leg, the flexor tendon is swollen, hot, and painful, just above the fetlock joint; quite well otherwise.

Treatment.—Foment for half-an-hour, and afterwards rub in *Rhus Lotion*, night and morning; apply a bandage, wrung out of cold water, round the leg, and give 10 drops of *Rhus*, first dilution, night and morning. At the end of a week there was less lameness and swelling. *Rhus Lotion* was then used night and morning alone. Three weeks from the commencement of treatment, the horse was sound, the swelling subsided, and the leg as firm as the other.

CASE II.—SPRAIN OF THE PASTER N JOINT.

In 1860, I was consulted respecting a horse belonging to His Grace the Duke of ——. I found great lameness, and swelling of the leg from the effects of a blister which had been applied to the *fetlock joint*. I ordered the application of lard to soften the scabs, and after they had been washed off, *Arnica Lotion* three times a-day. Three weeks afterwards, when much improved, he was driven out, and returned worse than

From my "Practical Reply."

ever. There was heat and slight enlargement of the pastern joint, which I considered the original seat of the disease. My opinion was asked as to firing, and I said I could cure the case without. The horse was afterwards taken to a veterinary surgeon, who said the disease was in the *fetlock* joint, and who advised two or three courses of blistering, a dose of physic, rest, and firing as a last resort. As His Grace disliked such severe treatment, he consented to mine. I gave 10 drops of the sixth dilution of *Merc. Cor.*, night and morning, and caused the pastern to be rubbed with the *Merc. Cor.* embrocation. In a fortnight the horse was sound.

CASE III.—SPRAIN OF THE HOCK AT THE SEAT OF SPAVIN.

On October 4th, 1860, I was requested to look at a bay horse, the property of the Midland Railway Company. This horse has been but a short time in the Company's service, and is just recovered from a severe attack of bronchitis, and is not in a fit state for severe exertion. Last evening he was heavily loaded, and was driven at a quick pace. This morning he is very lame, particularly on the right leg; he walks very widely, and is stiff in his hocks; on the seat of spavin there are great heat and pain on pressure.

Treatment.—The shoes were removed and elevated at the heel with a bar; the hocks were ordered to be well fomented twice a-day, and after each fomentation to be well rubbed with *Ruta Lotion*,*—one part of the *Ruta* to fifteen of water. To have internally, *Ruta*, 10 drops, first dilution, night and morning.

This treatment was persevered with for a short time, when he became sound and fit to go to work.

* See list of local applications.

CASE IV.—SPRAIN OF THE HOCK.—(*Sprung Hock*)

On the 17th October, 1860, my attention was directed to a brown gelding, the property of the N. London Railway Company, which came home from work the previous evening very lame.

Symptoms.—The left hock is very much swollen all round, and projecting on each side; the seat of the swelling is the seat of the "thorough-pin," and also the seat of bog-spavin, both very hot and painful on pressure; otherwise the horse is well.

Treatment.—The hock to be well fomented three times a-day, and immediately afterwards to be rubbed with *Ruta Lotion*, and 10 drops of first division of *Ruta* to be administered internally.

Under this treatment the horse became sound in ten days, and went to work, although the hock was still considerably enlarged; but by persevering in the above treatment it became quite right in a few weeks.

10.—BRUISES OF THE LEG AND FOOT

CUTTING AND BRUSHING is the result of striking a fetlock with the opposite foot. So many horses are so badly made in the legs that cutting is a matter of course. The use of a boot, and putting on a particular-shaped shoe, known to most smiths, are preventives.

SPEEDY-CUT occurs during fast action, usually

in horses with ill-shaped legs, when the inside of the leg just below the knee is banged by the hoof or shoe of the opposite foot. A boot and special shoe may be required here also.

OVER-REACH is the consequence of hitting the heel of a fore foot with the toe of the hind one. If neglected, it may end in quittor.

TREAD is a bruise caused when one foot treads upon the coronet of another foot, as when the horse is turning or backing; or it may happen when one horse treads upon another. Sharpened shoes, in winter, often cause considerable injury in this way. Quittor may ensue.

TREATMENT.

In all the foregoing varieties of bruises, the horse should rest if possible. *Arnica Lotion** should be applied three or four times a-day, either by being put on with the hand, or by damping a bandage with it. Treads and over-reaches should be well fomented by placing the foot in a bucketful of water or in a bran poultice. After the fomentation, damp a piece of tow in *Arnica Lotion*, put it on the injured part, and fasten by a bandage. Keep the dressing constantly damp with the lotion, and renew the tow once a-day. If there is a mattery discharge subsequently, put on a bran poultice medicated with

* See list of local applications.

a wine-glassful of *Calendula Lotion*,* and wash the surface is clean dress with this last lot and secure the pledget of tow by means of bandage.

11.—QUITTOR.

Quittor is an abscess at the coronet resulting from injuries to the foot, such as corns, pressure in shoeing, or penetrating wounds produced by sharp bodies in general. In severe, or neglected cases, inflammation arises at the injured part and matter forms, which spreads in every direction between the bone and horn, and at last appears at the coronet above the heel. The same condition of the coronet may follow severe treatment or over-reaches. Before the gathering breaks, observe a painful swelling at the coronet; when this breaks of itself, there is a discharge of matter from one or more holes. The essence of the disease consists in there being sinuses, or pipes, communicating with the original seat of injury to the surface of the skin. Such cases are usually attended with considerable pain and lameness, and, unless promptly and properly treated, lead to disease of the bone, or deformity of the foot.

* See list of local applications.

TREATMENT.

If the cause be corns, or penetrating wounds of the sole of the foot, the horn must be paired in such a manner as to let the pent-up matter out. Then put the foot in a pail of hot water, and afterwards in a large bran poultice. This should also be done for the swelling at the coronet, which should be opened if necessary. In bad cases the horse should not work. The best local application is *Merc. Cor. Lotion*,* injected three times a-day into the pipe at the opening on the coronet. If there is a second opening, stop it up during the injection with the point of the finger, so that the fluid may flow along the windings of the sinus.

If the foot is pricked in shoeing, or if bad shoeing has caused corns, a skilful farrier will know what to do.

* See list of local applications.

CHAPTER XVIII.

DISEASES NOT CLASSIFIED

1.—DISTEMPER OF DOGS.

DISTEMPER is not peculiar to any age; the young and old are subject to it, although the favourable period for the attack is between the sixth and twelfth month; or during the period of secondary dentition, at whatever month that may take place. It is both endemic and epizootic—in the former, confining its ravages within the limits of certain districts; in the latter, spreading wide and far. The disease is undoubtedly contagious although some dogs escape it just as some human beings escape fever or cholera. Dogs that are pampered and confined suffer from distemper more severely than others. The most frequent exciting causes are exposure to damp and cold and whatever induces debility of the system such as rickets, mange, catarrh, &c.

The symptoms present considerable variations, which depend upon the rapidity of the disease, the character of the prevailing epizootic, and the local complication; but they all show that the disease is essentially a low fever, accompanied by prostration of strength and by wasting, and with a strong tendency to some particular local lesion.

The onset of the attack is either sudden, or gradual, generally the latter. In the earliest stage, the dog is observed to be dull and depressed, and takes no notice of food, or of his owner; there is sometimes vomiting and purging, but usually these symptoms do not come on until a more advanced period. In a short time, a scanty, clear, and watery fluid issues from the nose; the eyes are watery and unusually sensitive to light; and the animal has a short, dry, husky cough, which appears as if provoked by irritation in the throat and is aggravated by exertion. The dog is observed to give an occasional sneeze. In the morning, there is a slight moisture, or perhaps a little dry mucus, at the corner of each eyelid; and the everted lid is rather more vascular than usual. The pulse is slightly increased in frequency—from 110 to 130 per minute, according to the patient's age. There is evident prostration of the nervous and muscular systems, progressive emaciation and no appetite. These catarrhal-like systems may lead the owner to

suppose that the disease is nothing more than simple "cold," but the dog's age and the prevalence of distemper will naturally arouse suspicion.

As the disease advances, fresh symptoms appear and existing ones become aggravated. There is constant shivering, accompanied by aversion to cold, and preference for warmth; the coat starts, the bowels are either relaxed or confined, and the feces dark; the urine is scanty and high colour; the pulse is still more frequent and compressible; the temperature of the surface, and especially of the paws, higher; and frequently an offensive vomit comes up from the stomach. At the same time, the nasal discharge assumes a purulent character, and increases in quantity; it adheres to the nasal orifices and obstructs respiration, much to the patient's annoyance; the respiration is quickened; and the cough is short, almost constant, and sonorous. On listening to the chest, the respiratory murmur is found diminished in intensity and somewhat obscured by mucous rattles. These symptoms show that the disease has travelled along the mucous membrane from the nose to the air-tubes, and that *bronchitis* is established.

Recovery, indicated by subsidence of all the symptoms and by return of appetite, may now take place; or the disease may run on to *pneumonia*. This event is known by the pulse remaining quick and becoming small, the thick nasal discharge

forming adherent crusts, and perhaps mixed with streaks of blood; and the respiration getting more and more difficult and laborious. The cough generally continues, and brings up rusty-coloured mucus. The most marked sound heard in the lungs is the tubular respiration which denotes consolidation of the pulmonary parenchyma. Death almost invariably happens in such cases, either from the severity of the lung lesion interfering with the function of respiration, or from exhaustion consequent upon the general disease.

Of the several complications which come on during the course of distemper, *conjunctivitis* and *keratitis* are the most common; and they appear, unlike the others, at an early stage of the primary disease. At first, the eyes are watery and intolerant of light, and a slight mucous discharge exudes between the lids. The vessels of the conjunctiva are unusually distinct, both on the globe of the eye and on the inner surface of the lids. The discharge soon assumes a purulent character, and when abundant runs down the face. The lids are frequently agglutinated, especially in the morning, and the photophobia is extreme. In those cases in which the inflammation extends to the cornea, a general cloudiness gradually comes over the cornea, rendering it opaque and white, and, of course, impairing vision. Then in the centre of the cornea, or towards one side,

there appears a circular ulcer, at first minute, gradually extending in depth and width. Minor abscesses sometimes form between the layers of the cornea. The ulcer at last penetrates the cornea, the aqueous humour escapes, the iris protrudes, and the extreme pain is relieved. When the distemper yields, these affections of the eye gradually subside, and the ulcer heals up, leaving only a small speck, which generally disappears after a little while.

In some cases, the chief force of the disease falls on the digestive mucous membrane. This complication is most apt to come on in distemper during the second period of teething, or when the dog has been fed too freely, or on improper food. Nothing, however, is so sure to encourage the tendency to diarrhoea and dysentery, and even to excite them, as purgatives, and especially castor oil. The derangement may consist simply in the passage of liquid stools, or of imperfectly digested food; but this is very prone to run to *dysentery*. The appetite is usually ravenous and vitiated, and there may or may not be vomiting. After irritation of the bowels and some indications of colic suffering, diarrhoea begins. The dog's back is arched, his abdomen tender to the touch, and he looks round every now and then to the seat of pain. He gives utterance to sharp, short cries. The intestinal discharge is liquid, dark colour

and chiefly consists of mucus mixed with more or less blood; in some cases pure blood is passed. There is strong straining in the act of passing the discharge. Subsequently, the breath becomes most offensive; ulcerations appear on the gums, palate, tongue, pharynx, and an offensive discharge flows from the mouth. All these symptoms increase in severity, the vital powers become profoundly prostrated, and death from exhaustion or convulsions soon ensues.

The disease known as "Yellow Distemper" is by some regarded as a local complication of ordinary distemper; by others as a distinct disease. The discharge from the nose is usually so scanty as to escape cursory observation. There is a characteristic yellow hue of the skin, mouth, and eyes; the fæces are yellowish and decidedly offensive; the bowels obstinately confined; the urine high coloured and scanty. The disease makes rapid progress; the animal will neither eat nor move; and in about three days death takes place in the majority of cases, unless the treatment be prompt.

In some cases a *pustular eruption* breaks out on the surface of the chest and belly, inside of the thighs, &c. The pustules break, and scabs form from the pus concreting. Writers differ widely in their views on the nature of this complication; it is a subject that requires further

investigation. The breaking out of such an eruption is on the whole favourable. Is not this form of distemper, in which there is pustular eruption, identical with, or analogous to, smallpox?

The nervous system is severely deranged in a large proportion of distemper cases.

Encephalitis, or inflammation of the brain and its membranes, begins differently in different cases. In some, this complication of distemper sets in by a paroxysm of general convulsions—"a distemper fit"—which may prove fatal at a comparatively early stage of the general disease, or which may be succeeded by other similar attacks that carry off the animal. In other cases encephalitis is preceded by the discharge from the nose diminishing or ceasing, or by an existing diarrhoea abating; and also by a peculiar bright and sparkling appearance of the eye. In a third class of cases, stupor is the first indication of head disease. It is most prone to come on when distemper attacks dogs while teething.

The head is hot; the carotid arteries throb violently; the eyes are injected and brilliant; the pupil contracted; the dog emerges from a spiritless state into one of vivacity; the appetite, recently absent is now voracious, and also depraved, for the animal eats immoderately, and

even gnaws at wood and other indigestible bodies. Then the jaws are champed, frothy saliva flows from the mouth, twitchings appear about the face, eyelids, and other parts; unconsciousness steals over the animal, and he appears to be blind, for he stumbles against every obstacle in his way. Sometimes symptoms of maniacal violence come on; the dog bites himself and every object near him, tears up the ground, &c. These symptoms subside and return after uncertain intervals, and generally terminate in convulsions. Suddenly, the eyes glare and turn in their sockets, and the dog falls down violently convulsed; its body and limbs spasmed, rigid, and variously distorted; consciousness suspended; the secretions passed involuntarily, &c. These movements gradually abate, the senses return, and the animal probably starts off in a fright, as if he were "mad." These fits vary in frequency, duration, and severity. Death may take place under the first attack, or not until after several violent seizures. The appearance of an eruption at the beginning of these attacks is a favourable event. In some cases, the unconscious animal turns his head to one side, and constantly walks round and round in a circle; the pupil of the opposite side is widely dilated, and general paralysis supervenes. Paralysis of the hind legs and chorea are occasional sequelæ of this disease of the brain.

TREATMENT.

The following medicines, in the first dilution when carefully selected according to the accompanying indications, will be found more successful in curing this canine scourge than allopathic means.

Aconitum, in the first stage, when there is dullness, loss of appetite, inflamed, watery eyes, quick breathing, and accelerated pulse. It may also be resorted to at a later period of the disease to check the tendency to local inflammations.

Belladonna is indicated, especially when the eyes and throat are affected, as indicated by sensitiveness of the eyes to light, increased vascularity of the white of the eye, and of the inner surface of the lids, agglutination of the lids, and evident pain in these parts; and, as regards the throat, by an inflamed appearance of the back of the mouth, and by dry, irritating cough, evidently excited by irritation at the top of the windpipe. It is also a valuable remedy when the brain is involved, with such symptoms as delirium, and convulsions. In some cases of encephalitis, it may be necessary to give *Aconitum* and *Belladonna* alternately.

Bryonia is required when symptoms of bronchitis set in, viz., short, hurried, and oppressed breathing; rattling of mucus in the chest; frequent moist cough, &c. Both this medicine and *Aconitum* may be needed in such a case as the

Arsenicum (second dilution) is indicated by these symptoms: intense injection of the vessels of the eye; swelling and closure of the lids; profuse secretion of tears, and intolerance of light; ulcers and specks on the cornea. Also, by frequent sneezing and profuse discharge of thin, acrid mucus from the nostrils, with obstruction; or, an offensive and bloody discharge from ulceration of the nasal membrane; also, when the bowels are affected, with frequent discharge, accompanied by colicky pains, straining, weakness, and exhaustion. This remedy is indicated whenever the disease has prostrated the powers of life, the animal then being emaciated, weak, without appetite, and otherwise in a state apparently lifeless.

Phosphorus is indicated particularly when the lungs are inflamed, as shown by the rust-coloured expectoration, the laboured breathing, and the characteristic signs heard on examining the lungs. It is also a good remedy for the diarrhœic complication, when the discharge is thin, and slimy, or even bloody.

Phosphoric Acid has been of service when there is excessive, slimy, or watery diarrhœa; fœtid, purulent discharge from the nose; and general prostration.

Mercurius Corrosivus (sixth dilution) is indicated when the mouth is covered with small superficial ulcers, the secretion of saliva increased,

and the breath offensive; and also, when there are frequent discharges of bloody mucus from the bowels, with colic, urging, and straining.

Mercurius Dulcis is more particularly required for the so-called "yellow distemper," the advance of which may be anticipated by the diminution or absence of the natural colouring matter in excrement. When this is observed, or when disease is established, *Merc. Dulc.* should be immediately given in from 2 to 5-grain doses of the A trituration every two or four hours, according to the severity of the symptoms. Should feverish symptoms co-exist, repeated doses of *Aconitum* should be interposed.

Veratrum may be of service in cases of diarrhoea, &c., indicating *Arsenicum*, but continued in spite of it. Or both these remedies may be given alternately, especially when the disease is advanced, and the symptoms are of a typhoid character.

Antim. Tart., *Kali Bichrom.*, *China*, *Baptisia Hydrastis*, and two or three other medicines may occasionally be used for particular cases and symptoms. Inhaling steam medicated with *Hydrastis* is of the utmost service when the nose is much affected. *Argentum Nitr.* is a valuable remedy for some of the nervous after-symptoms.

The patient should be put in a clean, dry place, where he can breathe plenty of pure air, and

be protected from cold and damp. Cleanliness is of the utmost importance. The discharges should be removed at once, and the litter changed every day. Soft hay forms the best and most comfortable bed, and it can be easily replaced when soiled. A certain amount of warmth is necessary. M'Dougal's disinfecting powder may be used if necessary, according to the directions give on the packet.

It is impossible to be too particular about the diet. No solid food of any description must be given until the disease is quite over. Weak broth or gruel, and fresh cold water, are sufficient for the first few days; boiled rice, milk, and bread, are also good. Fancy food, such as domestic favourites are allowed to eat, must be rigidly withheld; otherwise, all such articles will help the disease to kill the dog. At a later period of the disease, when the appetite is lost, or the animal is too weak to eat, the most nutritious food must be given by gentle force. Strong beef-tea, arrowroot, &c., should be given frequently in small quantities. When there is great prostration, wine, either alone or mixed with beef-tea, is required. During convalescence, the diet must be as strictly regulated. Animal food should be very carefully and gradually introduced; and overloading the stomach or forcing the appetite are equally hurtful.

CASES OF DISTEMPER.

*To the Editor of THE FIELD.**

SIR,—I have no wish to enter into a discussion the relative merits of allopathy and homœopathy; I simply wish to state a “fact” in the treatment of distemper. Last spring, my young hounds (thirteen couple) were taken with it, in a very severe form soon after they came into kennel. They were treated under the old system, and in a very short time four and a-half couple died, and there were six couplings lying in what I called the condemned cell, with scarcely a hope of recovery—they were in the stage of exhaustion, and some of them stone-blind. Being a strong homœopathist, I determined to see what the medicine would do for them, and sent for Mr. Moore, of Upper Berkeley Street. One died half-an-hour after he came, but in forty-eight hours, or less, there was a visible change for the better in the rest, and eventually they all entirely recovered.

I am convinced, that if masters of hounds would only adopt the system, more than half the hounds would die of that fatal disease would be saved.

MALIN

2.—GLANDERS AND FARCY.

These are the names for two forms of the same disease—glanders, affecting the nasal cavity and farcy, the absorbents. This is proved by

* Reprinted from *The Field*, of Nov. 3, 1867. This letter is rather a lively discussion with the Editor, which is published, with additional matter, in my pamphlet “On Distemper of Dogs.”

fact that inoculation with the pus of either disease will produce the other. The disease is essentially a constitutional cachexia, with local manifestations in the nose, or absorbents, or in both.

In the horse tribe, it arises spontaneously from poor feeding, overwork, ill-ventilated stables, and other causes of a similar kind, which are notoriously capable of engendering putrid poisons. It is also communicable to other animals by inoculation.

Acute Glanders arises suddenly with symptoms of high feverish excitement. The pulse and breathing are quickened. A copious, offensive, mattery discharge runs from the nose. The nasal membrane is seen to be congested and extensively ulcerated. In some cases incipient farcy-buds appear on different parts of the skin in the form of small, hard tumours. Death speedily follows.

Chronic Glanders is more frequent than the acute form. It is characterized by a watery discharge from one or both nostrils, usually only one, and in the majority of cases, the left; subsequently, the discharge is glairy, like white of egg; and still later, mattery, bloody, gluey to the touch, and horribly stinking. It is seen sticking to the orifice of the nose. The discharge runs constantly. An enlarged and hard gland is felt adherent to the inner surface of the lower jaw

on the side corresponding with the diseased One, or several ulcers are seen on the nasal bone, with sharp edges and scooped-out penetrating deeply and widely, until even bone is eaten into. If the ulcers are sit high up, they will be beyond the reach of v The nose is also studded with small eleva which subsequently break out into ulcers o above character. Sometimes a horse will l long time with such symptoms and have health; but usually, at this stage, unhealth inflammation, followed by abscesses, takes pla the lungs. Quick breathing, cough, rapid ing, and rattling heard on applying the ear t sides, characterize this termination.

Chronic Farcy begins with inflammation o lymphatic vessels and glands. The swell known as *farcy-buds*, are hot, hard, and pai and are seated either in glands, or at the v of the lymphatic vessels, on any part of the face, such as the face and lips, but especial the legs. Running between these swell hardened cords are felt, which are the infla absorbent or lymphatic vessels. Subseque when these swellings suppurate, the skin br unhealthy sores remain, and a thin, cop sanious discharge flows. Eventually glar comes on.

Acute Farcy does not differ from the chr

except in being more rapid in its progress, in the attendant constitutional disturbance being greater, and in the almost invariable co-existence of glanders.

TREATMENT.

I cannot agree with those who tell us that this disease is absolutely incurable. Acute cases, or the chronic forms occurring in old, worn-out horses, generally end fatally; but not so others, if treated as I shall presently point out.

As soon as the disease is discovered—and all nasal discharges should be looked upon with suspicion—the animal should be separated from other horses, and placed by himself. The stall and stable utensils should be thoroughly cleansed and disinfected. No man with a broken skin should touch a glandered, or farcied horse.

The sovereign remedy for glanders and farcy is *Kali Bichromicum*—a drug which I was the first to recommend and use in this disease. At the present time I dissolve one grain of it in twelve fluid ounces of water, and give a wine-glassful of the solution three times a-day. Locally, I apply night and morning to farcy-buds a solution consisting of one dram of *Kali Bichr.* and sixteen ounces of water.

The following out of a large number of cases thus treated—cases of unquestionable glanders and farcy—establish my assertions:—

CASE I.—GLANDERS AND FARCY.

On 11th September, 1860, I was requested to examine a horse belonging to a large carrying com

Symptoms.—Pulse 36 ; respiration 9 ; copious discharge from the right nostril, of a dirty-green colour and adhering to the nose ; the septum nasi is one of ulcers ; around the nostril there are nine buds ; sub-maxillary gland is enlarged, and projecting beyond the ramus of the jaw.

Treatment.—To have *Kali Bichr.* three times a

11th October.—Since the above date the horse has been steadily improving. The buds around the nose have disappeared after a few doses. The discharge has gradually diminishing ; the deep excavations of the ulcers filling up ; and the enlargement of the glands almost gone.

19th.—He is very itchy about the hind legs ; has eruptions all over his body, for which he has taken *Arsenicum*, 10/1, three times a-day.

23rd.—Eruption quite gone, and the nasal ulcers are healing beautifully ; is doing light work. Res *Kali Bichrom.*

28th.—To all appearance well.

SEVERAL CASES OF FARCY.

Case 1.—A six-year-old horse, used in a team of three. One, if not two, of his former companions have died of farcy under other treatment. Several weeks this horse had been under allopathic treatment without receiving any benefit. He was brought from the establishment of an allopathic veterinarian, and placed under my care. The right side of the mouth was one mass of farcy buds, a number

which had coalesced and formed a large open sore ; from this numerous buds proceeded along the jaw and terminated in the region of the sub-maxillary gland ; this gland was enormously enlarged, and bulged beyond the ramus of the lower jaw, to which it was in close opposition ; the hair was rough and staring ; and the appetite deficient. Under the use of *Kali Bichrom.*, applied topically and given internally, the horse was cured in a month and went to his usual work.

Case 2.—This horse was affected exactly like the last. The disease affected the left side, and had not been previously under other treatment. He was cured by the same means.

Case 3.—Another horse affected in every respect like case 1, was cured like it in a very short time by the same remedy.

Case 4.—The disease affected the right hind leg of the horse. The leg first swelled, and then the buds appeared on the pastern and fetlock joints ; they extended upwards around the whole of the leg as high as the tarsus, and on the inner surface of the groin. The buds, in various stages of development, were so numerous that they could not be counted. The local and internal use of *Kali Bichrom.* effected a cure in a very short time.

I have never seen nor heard of such results from allopathic treatment.

All these horses have been at regular work since their illness, now sixteen months since, and no one can tell they ever had farcy. Two of them have been examined by Professors Spooner and Varnell, and pronounced sound, excepting that one was a roarer. He was so before the attack of farcy.

3.—RHEUMATISM.

IN HORSES.

Acute Rheumatism is a febrile disease, attended with inflammation of the structures rounding the joints, or of the lining membrane of the heart, or of the sac inclosing the lungs. Some horses are more subject to it than others, owing to constitutional peculiarity, or hereditary predisposition. It is directly excited by exposure to damp and cold, either during health, or during convalescence from some catarrhal or pulmonary attack.

Sudden lameness is the first most marked symptom; it occurs in one or more legs, and in one or other joints—shoulder, stifle, hock, pastern, hip, &c. The affected joint, or joints, are hot and tender to the touch, and swollen. The animal stands still, and is very loth to stir a step. The breathing and pulse are both quickened—the latter also full and bounding. Judging from the animal's manner, there is severe pain in the affected parts. The bowels are active, the tongue furred, and the saliva sour to the smell. There is a marked tendency to one joint being affected after the other; the disease often returning to the one first attacked. Above all, the heart and pleura are

to be involved, in which case the gravity of the attack is greatly increased. In fatal cases, death from exhaustion, or from incurable lesion of the heart, comes on suddenly.

Chronic Rheumatism is of the same nature as the acute, but the symptoms are much milder in character, and of longer duration. It is characterized by sudden lameness, of one leg to-day, of another to-morrow, especially after exposure; and there may, or may not be some swelling, heat, and pain in one of the joints of the leg. After cure, it is apt to reappear, and may continue more or less for months. It arises either as an independent affection, or as the result of an acute attack—most frequently the former.

Lumbago is rheumatism of the lumbar fascia, and an animal thus attacked is said to be "loin-bound." *Pleurodynia* exists when the disease affects the muscles between the ribs and the fibrous fascia lining the chest. The horse is said to be "shoulder-tied," or to have *chest-founder*, when the fibrous tissues about the shoulder are the seat of rheumatism. Lastly, cases are occasionally met with not unlike human sciatica.

IN OTHER ANIMALS.

Oxen and dogs are probably more subject to rheumatism than even horses. Cow leeches used to call rheumatism of the back, *chine-felon*, and

of the joints, *joint-felon*. In dogs, *kennel lameness* is a rheumatic affection. The symptoms in their general features, of these different forms or varieties of the disease, do not differ from those observed in the horse.

TREATMENT.

Aconitum is indicated at the beginning of attack, when there are symptoms of febrile excitement; and also when the general symptoms and physical signs point out heart complication.

Belladonna, when the affected parts are extremely tender to the touch, and painful when moved, causing lameness. It is specially suited when the shoulder is the seat of the disease.

Bryonia is indicated in cases of acute rheumatism, particularly of the legs, attended with frequent, full pulse, thirst, high-coloured urine, aggravated by motion.

Nux Vomica is frequently beneficial when the stomach is out of order and the bowels costive and in those cases which are attended with symptoms of paralytic weakness of the muscles of the legs.

Rhus is another remedy which is attended with good results in those cases where the animal appears to have lost the muscular power of the legs and when the muscles of the back are principally affected. Also, when there is stiffness on flexion.

moving, and when the lameness is less after exercise.

Arnica, Arsenicum, Mercurius, and Sulphur, are also indicated in certain cases.

DOSES.—10 drops for horses and oxen ; 5 for sheep ; 2 to 5 for dogs. Give a dose every two, four, six, or eight hours, according to the violence of the symptoms.

The following cases quoted from my "Contributions to Veterinary Homœopathy," in the Brit. Journal of Hom. for 1858, are excellent examples of the symptoms and treatment of this disease in its different phases :—

CASE I.—RHEUMATISM AND LUMBAGO IN COW.

On March 10th, 1858, I saw a cow belonging to R. Waller, Esq., Withington, near Manchester.

The symptoms are :—Pulse 72 and full ; respiration right ; great lameness of right leg ; some swelling over the hip joint ; no appetite ; hair standing on end ; appears to suffer great pain ; the back is stiff, and so tender that when pressed upon the cow groans aloud.

Treatment :—To have *Aconite* 1, 10 drops every three hours ; keep in doors and clothe well.

March 11th.—She is now down and cannot rise ; no other change. To have *Aconite* and *Bryonia*, 1st dil., 10 drops every three hours alternately.

March 12th.—Rather better ; pulse reduced ; has eaten hay and bran mash.

March 13th.—No further improvement. To have *Belladonna* 1, 10 drops, thrice daily.

March 14th.—Better; appetite improving; bow getting right; has been attempting to rise.

March 15th.—She got up to-day; appetite good; rumination resumed. To have *Sulphur* night morning for a few days.

CASE II.—RHEUMATISM—HEART INVOLVED.

A van-horse belonging to the London and North Western Railway Company. This horse is nine years old, and has had several rheumatic attacks during the last four years he has been in the Company's possession. Twelve months ago I attended him for an arthritic seizure, resembling the present one, only not so severe. Whilst out delivering parcels, and standing for a considerable time exposed to a cold, frosty, cutting wind, he was observed to limp at starting; this increased so much that he could go no longer, and had to be brought home.

November 24th, 1858.—*Symptoms.*—Pulse 60; full; respiration 30; little or no appetite; dung hard; abdomen tucked up; urine scanty and high colour. When he is in the stall, holding up the right hind leg about a foot from the ground; when made to move, he scarcely puts his toe to the floor; examined the feet and found nothing wrong there.

Treatment.—To have *Aconitum* 1, 10 drops every three hours.

25th.—Considerably better; still very lame, but can put the foot down; pulse 64 and strong; respiration 24.

Continue medicine.

26th.—He is now as lame on the left hind leg as he was at first on the right; holds it up, and

evidently afraid to stand upon it; pulse 54, irregular and intermittent—sometimes strong and full, sometimes so weak that it can scarcely be felt; respiration quickened.

To have *Digitalis* 1, 10 drops every three hours.

27th.—Much better; pulse 44, still intermitting occasionally; can walk on both legs alike; some stiffness when moved; fetlock joint somewhat swollen; dung and urine natural; appetite good.

Continue medicine.

28th.—Still improving; pulse 36; the horse is lively and eats well; rather lamer on the right leg again.

Continue medicine.

30th.—Pulse is now regular; otherwise same as on 28th.

To have *Bryonia* 1, 10 drops thrice daily.

December 10th.—Gone to work.

CASE III.—ACUTE RHEUMATISM.

March 16th, 1859.—A colt, belonging to Messrs. Syddall Brothers, Chadkirk, near Manchester, required my attendance.

Sometime ago this animal was successfully treated for a severe rheumatic attack. On March 4th, he was found in the field early in the morning, having been turned out of his comfortable box by some mischievous fellow. On the following day he was feverish, off his food, stiff, and unable to move except with considerable pain and difficulty. *Aconitum* was given thrice a-day. On the 8th I was consulted, and prescribed *Bryonia* and *Rhus*; but no benefit following, my attendance was requested.

The symptoms are:—Pulse 72, hard, and contracted; respiration accelerated; nostrils dilated; the neck held stiffly, the head being poked out; there is considerable difficulty in turning round in the box, consequence of pain and rigidity of the loins; the hind legs seem weak, particularly the right one; the lumbar region is somewhat arched and painful on a circumscribed part; the belly is tucked up; the horse walks in a peculiar manner, hesitatingly and weakly as if from partial paralysis; he is irritable and easily excited; the appetite is impaired; the bowels regulate the urine scanty and high coloured.

Treatment.—To have *Rhododendron* 1, 10 drops every three hours.

18th.—Better; pulse 54; walks better; neck less stiff; considerable swelling in the middle of abdomen; loins less painful, &c.

Continue medicine.

23rd.—All right. The medicine to be continued night and morning for a few days.

24th.—Summoned to visit the horse, as he was much worse. Pulse 72 and full; respiration blowing and laborious; the skin is saturated with sweat; the left hind hock is very much swollen, and exquisite painful to touch; the horse is dead lame and can only point the toe of the affected limb; the mouth is hot and clammy; the urine turbid; the bowels constipated; the appetite gone.

To have *Ruta* 1, 10 drops every three hours; the hock to be well rubbed night and morning with *Ruta Lotion*,* and a flannel bandage to be applied.

25th.—Received a message to the effect that the case was considerably better.

* See list of local applications.

27th.—No lameness : the hock is still somewhat swollen, also the fetlock joint ; eats well and is hearty, Continue medicine and lotion.

30th.—Well.

4.—MYALGIA.

In this disorder the muscles are the seat of pain. Horses and dogs, more frequently than other animals, are affected with it after racing, hunting, or any other severe, or long-continued exertion. *Soreness and stiffness* express the same state in man. Usually, the pulse and breathing are little, if at all, disturbed, except after exertion, or when there is considerable pain. When the muscles of the chest and shoulder are principally affected, the disease resembles rheumatic pleurodynia, or spraining the shoulder, in which latter case the horse walks down hill with great pain and difficulty, but up hill with comparative ease. Pressure of the affected muscles shows that there is great tenderness. Myalgia may be confounded with chronic rheumatism, from which, however, it chiefly differs in not attacking fibrous structures, or those entering into the formation of joints—in usually following severe exertion, or

from a horse being over-weighted—and in the shifting character of rheumatism being absent.

The best remedy is *Arnica*—10 drops every four hours.

The following was probably an instance of myalgia :—

CASE.

On June 3rd, 1858, a pony, 13 hands high, belonging to Mr. Kershaw, solicitor, Manchester, had the following symptoms :—back arched, and as stiff and immovable as if the vertebræ were made of one piece ; difficulty in moving forward both legs, especially the right one ; evident pain attending motion ; soreness of the muscles ; lies down much ; when crouching, preparatory to lying on the ground, considerable hesitation is manifested, arising no doubt from the pain and difficulty attending the muscular movements ; instead of lying down slowly and gently, he *drops* to the ground ; he rises with great difficulty ; the appetite is tolerably good ; the pulse 44, and the breathing 20 per minute, &c.

Treatment.—To have 10 drops of *Merc. v. 5*, and the same dose of *Rhus 1*, every six hours ; rub *Rhus Lotion* on the loins and shoulders.

On June 4th, pulse and breathing normal ; back in natural position ; much improved in all other respects.

On June 5th, the groom called to say that my patient was prancing about at his exercise this morning.

5.—PURPURA HÆMORRHAGICA.

IN HORSES.

This disease depends upon some unascertained alteration in the blood, or blood-vessels, or both, which allows the blood to escape into the structure of the skin, into the tissues under the skin, and into internal organs, and cavities, and ducts.

The causes are believed to be those which are calculated to lower vital power, or to impair the process of blood-making (sanguification), such as, close, ill-ventilated, damp stables; overwork; bad or scanty food, &c. I have noticed that in nearly, if not in every case, the symptoms of purpura have been preceded, at a longer or shorter period, by a catarrhal affection.

The pulse ranges about 60, and is full; the breathing about 20 per minute. Swellings of variable size and irregular outline, and consisting of effused blood, suddenly appear under, or in the skin, in different parts of the body—especially the legs. The swelling of the legs about the hocks and knees is often enormous, and ends abruptly at the stifle and elbow joints. The lips and nostrils are much swollen, tense, and shining.

The openings of the nose are often so much narrowed as to cause some difficulty of breathing. On examining the nasal membrane, it is found very red and studded with purple spots which vary much in size—from a shilling downwards.

The inside of the lips is likewise covered with similar spots. If one of them be pricked, fluid blood exudes.

Usually, in a day or two, the pulse becomes weaker, the urine high coloured, and further extravasations occur, unless the attack takes a favourable turn. The swellings, which at first have a well-defined margin, which is gradually lost in the adjacent skin, extend to the breast, flank, belly, quarter, &c.; the membrane of the eye is blood-shot; a dark, bloody fluid, alone or mixed with matter, flows from the nose; the nasal membrane becomes black, and the horns and spots slough off, and the tissue is seen hanging in shreds. The patches of swelling on some parts of the body become cold, hard as a board, insensible to feeling—die, in fact, and shortly slough off, leaving raw, unhealthy sores. Other patches, especially those under the belly, exude a fluid which may be seen hanging in drops on the hair. There is also in severe cases a discharge of blood by the urine, either mixed up with the urine, or passed in small clots. In addition, the animal grows weak, eats little or nothing, and cannot move.

legs from the swelling preventing bending of the joints.

Such are the essential symptoms of this disease.

TREATMENT.

I have tried several medicines, but now I never use any other than *Kali Bichromicum*, which I regard in the light of a specific, from its remarkable power over this disease.

During the last seven years, I have treated eighteen cases, with only one death, ten of them in horses belonging to the Midland Railway Company.

The following are cases in point:—

CASE I.

On the 23rd of October, 1860, I was requested to look at a bay horse, the property of the Midland Railway Company. This horse had a severe attack of bronchitis on the 16th of September, and resumed work on the 1st instant, since which time he has been well and improving in condition until yesterday, when he was observed by the horse-keeper to be off his food, and looking dull and heavy.

Symptoms.—Pulse 60, full and strong; respiration 20; fore legs, particularly the left one, swollen up to the knees, or rather higher, and in consequence of this swelling he moves with very great difficulty; the Schneiderian membrane is beautifully spotted with small purple spots about the size of a pin's head.

Treatment.—To have *Aconite*, 10 drops, first dilution, every three hours.

24th.—Much better; pulse 44, and of the usual character; respiration 14; the swelling is now up the chest, but decreasing a little on the legs; there is a considerable and painful swelling on the belly, and on the left flank; the purple spots on the Schneider membrane are much fainter; appetite good; to have *Kali Bichrom.*, 10 drops, first dilution, every three hours.

25th.—The swelling on the right leg is nearly gone, and that on the left is somewhat diminished; same that on the belly; appetite good; pulse and respiration same as yesterday. Continue medicine.

26th.—Considerable amendment; pulse 40; respiration 10; swelling of the right leg entirely gone, that on the left is considerably diminished, and swelling on the belly is gradually disappearing. Continue medicine three times a-day.

28th.—Pulse and respiration normal; there is a little swelling on the left knee, and on the side of the abdomen; otherwise the horse is well. Continue medicine night and morning.

30th.—Well, and gone to work.

CASE II.

On August 13th, 1861, Mr. W—— came for me to go and see one of his horses which was unwell. The horse has been ill for four days, but had previously been cold and cough before the swelling came on.

Symptoms.—Pulse 64, and full; respiration 14; minute; the nasal membranes are thickly studded with scarlet spots, from the size of a pin's head to that of a shilling, and the alæ are somewhat swollen. The hind legs are swollen up to the patella, where the swelling terminates abruptly; the sheath is enormously swollen, and so are the fore legs up to

chest, where the swelling terminates abruptly; the urine is scanty, and high coloured; fæces contain more mucus than usual; appetite fair.

Treatment.—To have *Kali Bichromicum*, 10 drops, first dilution, three times a-day.

This case steadily improved under the use of this remedy. At the end of three weeks from the commencement of the treatment he went to light work, and in another week went to his regular job.

CASE III.

On December 12th, 1858, I visited a horse belonging to Messrs Taylor, Hampson, and Pegg, calico printers, Manchester. A fortnight previously the horse began to have a frequent cough, considerable difficulty in swallowing, and loss of appetite, for which *Belladonna* was given. Since then he has been getting worse, and being no longer fit to work, I was sent for.

The symptoms are :—Pulse 50 and full; respiration 16 per minute; the nasal membrane as far as it can be seen is studded with numerous small, round, scarlet spots; there is a clot of mucus in the left nostril; cough hard and frequent; eyes watery; profuse lachrymation from right eye; mouth dry; breath more unpleasant than offensive; tongue covered with a yellow fur; dung offensive; urine thick, and dirty-brown in colour; hind legs very much swollen, especially around hocks; the swelling extends upwards for twelve inches and ends abruptly; the fore legs are also swollen up to the knees; the hind legs are paddled uneasily, and there is stiffness and difficulty in walking.

Treatment :—To have *Belladonna* 1, 10 drops every three hours; sloppy bran mash; a few carrots; very little hay.

13th.—Pulse 40, soft and full ; respiration 10 ; so of the scarlet spots are fading ; cough moist, and frequent ; tongue cleaner ; appetite improved ; swell about same, but not so painful. Continue medicine every four hours.

15th.—Some of the spots seem to have coalesced for they are not so numerous, and are much larger, large as a fourpenny-piece, decreasing in size to a point ; the swelling in the legs is much less ; the animal can walk with greater freedom ; the appetite is good, and the excretions natural. Continue medicine.

18th.—Since last report the horse has been slowly improving ; the spots are nearly all gone, except about the size of a shilling ; the swellings are reduced and horse can walk about. Continue medicine.

December 21st.—I was sent for in great haste, the horse was much worse. Pulse 50, and soft, full and compressible ; the nasal membrane is quite black the nose hard, swollen, and exquisitely painful ; respiration 16, and snuffing ; the swelling, which reaches as high as the stifle joint where it terminates abruptly is hard, hot, tense, and so tender that he will scarcely allow it to be touched ; the fore legs are also swollen especially at the knees ; the horse can hardly move himself ; he has a dull and dejected look, and eats little or nothing ; the bowels are costive, and the urine scanty and high coloured.

To have *Kali Bichrom.*—1 grain in 24oz. of water 2oz. for a dose every two hours.

22nd.—Much better ; pulse 46 ; breathing 16. Ecchymosis on the right nasal membrane has sloughed off, leaving a raw, ragged surface ; that on the left becoming detached ; a piece about the size of a half crown has sloughed off each nasal ala. The tumour

faction of the muzzle is considerably less ; the legs are much diminished in size, and not so painful ; on the right side of the breast there is a hard, circumscribed swelling about the size of a goose's egg ; on the left side of the chest there are two similar extravasations ; appetite good ; looks more lively.

Continue medicine every three hours. To have boiled oats, beans, and bran mixed, given frequently in small quantities, alternately with carrots.

23rd.—Some shreds of slough are hanging loose in left nostril ; others have been snorted out ; the raw surface on the right nostril is filling up ; the swellings of the legs are rapidly subsiding, and the horse walks freely about the box. A large slough is separating from the inside of both thighs where the swelling was so great.

Continue medicine every four hours.

24th.—The sloughs on the left nostril have all been discharged, leaving a raw surface ; the extravasations on side and breast are not so large.

Continue medicine thrice daily.

28th.—The horse has been gradually improving and is now quite well.

6.—MILK FEVER IN COWS.

This disease, otherwise called *Parturient Apoplexy*, and *Dropping after Calving*, in particular attacks cows that are in a plethoric condition from over-feeding.

It comes on shortly after calving, rarely at the third day, either suddenly, or with certain premonitory symptoms, such as, dullness and depression, loss of appetite, hot horns, hot and dry nose, bowels confined, pulse and breathing quickened, and diminution or suppression of milk. The hind legs appear to be weak, are slightly separated from each other, and the cow now rests on one, and now on the other. This paddling and shifting about increase; the cow supports herself against the wall, and at last, falls down heavily, and is utterly unable to get up again. When down, the symptoms vary in different cases, according as delirium, or coma is present. If the former, the cow tosses her head about, wriggles her body, lashes her tail, moans and bellows; the eyes are wild and staring; and the countenance has a fierce expression. If the latter, the eyes are dim and utterly insensible to light; the ears are hung down loose; when the head is raised it drops to the ground unless supported; the mouth is open; the power of swallowing is lost; and there is no longer any sensation of feeling in the skin. The paunch is more or less distended with gas as soon as cud-ding ceases, and this greatly adds to the difficulty of breathing.

In fatal cases, the distension of the belly, the laboured breathing, and the unconsciousness

increase, no urine is discharged, the surface of the body becomes cold, and death, sometimes preceded by convulsions, soon takes place.

TREATMENT.

After calving, in a highly-fed cow, she should be carefully watched for at least three days and *nights*, and if symptoms of milk-fever should appear, begin the treatment without a moment's delay. The cow should lie in a roomy place, and be properly clothed. The milk should be drawn off at least night and morning; and the urine also, if it is not passed naturally. Position is of great importance. The cow should be placed in the natural position of rest, with the body either perfectly level, or slightly raised in front, and be kept in this position by bundles of straw laid along her sides. Every three hours, or so, she should be turned from one side to the other. On no account must she be allowed to lie stretched out full length, or with her fore-parts lower than her hind.

The best medicines, according to my experience, are the following:—

Aconite and *Belladonna*, in turn, when we find quick, full pulse; heaving breathing; hot horns and nose; wild, staring eye; stoppage of milk; tossing of the head, &c.; rattling in the throat, &c.

Ammonium Causticum, for swelling of the belly; laboured breathing; quick pulse; coldness of the skin, &c.

Arsenicum, for the sleepy symptoms, such as insensibility to the prick of a pin; loss of power of seeing and of swallowing; glassy eyes, &c.

Nux Vomica is of service after the severe symptoms have declined when weakness of the hind legs remains.

DOSES.—10 drops every half-hour or hour, according to the violence of the symptoms.

The following cases, reprinted from the *British Journal of Hom.* for 1858, illustrate different conditions of milk fever and the treatment required:—

CASE I.—MILK FEVER.

A cow belonging to Mr. Oldfield, Hyde Road, near Manchester.

February 29th, 1852.—Present state:—Twenty-two hours after an easy calving, pulse full, strong, and 100 per minute; breathing difficult and 36 per minute; she rises with difficulty, and, when upon her feet, she appears uneasy, restless, and paddles with her hind legs; the udder is hard, painful, and swollen, especially in the back part; she gives no milk, and does not chew the cud.

To have *Aconitum* and *Belladonna* 1, 10 drops each every hour, time about.

I visited her again at seven o'clock at night, and found her in the following condition:—She is on the ground

and quite unable to get up ; she tosses her head about from one side to the other ; curves her neck and rests her horn on one of the shoulders ; the paunch is enormously swelled ; the fundament and bearing are open and flabby ; the mouth of the womb protrudes ; the pupils are dilated and almost round.

To have *Belladonna* 1, 10 drops every half-hour.

March 1st.—Much improved ; pulse 58, and breathing 24 per minnte ; she is quite quiet ; the swelling has subsided, and she is all but well in other respects. Continue same medicine.

3rd.—Not so well in consequence of taking too much food. Continue medicine.

5th.—Has made several efforts to rise ; in other respects improving again.

To have *Nux Vomica* 1, 10 drops every three hours.

8th.—Got up to-day, and excepting some stiffness in the joints, she appears all right.

CASE II.

A cow belonging to Mr. Barlow, Blackley, near Manchester. This cow, very high in condition, calved, and on the following day appeared to be rather unwell. The owner, fearing that the cow would have this disease, sent for some medicine lest his conjecture should prove correct. I sent *Aconite* and *Belladonna*, to be given every three hours alternately. Next day, about forty hours after parturition, I was sent for.

May 16th, 1859.—Symptoms :—Pulse 74, full and bounding ; respiration much quickened ; eyes wild and staring ; the cow staggers in her walk, falls down on her kness, and sways with the hind quarters from one side to the other ; the udder is hard, the milk suspended, the bowels relaxed, &c.

Treatment.—To have *Ammonium Causticum* and *Bryonia* 1, 10 drops every hour alternately.

17th.—Mrs. Barlow called to say that the cow went down yesterday afternoon, and is quite unable to rise; and that she is now in the sleepy or comatose stage. Being busy at the time, I could not visit the cow until night; but I sent *Arsenicum* 1, 10 drops to be given every hour in the meanwhile. At 9 o'clock p.m., I found the cow resting and quiet; pulse 66; milking freely; drinking gruel, &c. She has been very violent during the day, throwing the head about, lashing the tail, and exhibiting other symptoms of cerebral excitement. Continue the *Arsenicum*.

18th.—Got up, and is quite well.

This is the eighth case of milk fever which I have treated homœopathically for Mr. Barlow; all the cases recovered.

CASE III.

A seven-year-old, *very highly*-fed cow, belonging to Mr. Joshua Marler, Newton Moor, near Manchester. About twenty-four hours after an easy delivery, her fifth, she began to show all the warning symptoms of this disease, and I was sent for immediately.

May 20th.—Present state :—The pulse is feeble, and quickened; the udder is hard, distended, hot, and yields no milk; no dung or water comes away; the fundament and bearing are open and flabby; the body is occasionally rolled and writhed about uneasily and the tail lashed; she sometimes tosses herself from side to side, but is, of course, quite unable to rise; the belly is swollen, she cannot hold her head up; the eyelids are half closed; the pupils dilated; tears roll down the face—in short, without enumerating others, she has all the symptoms of the sleepy stage.

Treatment.—To have *Belladonna* 1, and *Arsenicum* 3, every hour, time about, until improved, then every two hours.

May 21st.—All the above symptoms are much relieved; the swelling is gone down; she can hold up her head; has dunged and made water; drank some gruel, &c. Continue medicine.

May 22nd.—She lies like a cow resting, to all appearance well, only unable to rise.

To have *Nux Vomica* 1, 10 drops every three hours.

May 23rd.—Got up this morning, all right.

CASE IV.

On May 22nd, 1858, Mr. Barlow, farmer, Blackley, near Manchester, had a cow ill. Three years ago this cow had milk fever, and last year retention of the placenta, from both of which she speedily recovered under my treatment. Three days ago the parturient process was protracted, and so difficult that manual assistance had to be rendered. She was doing well till yesterday, when she was observed to be very restless. Suspecting, from former experience, that milk fever was setting in, the owner gave *Aconite* and *Belladonna*. This morning she was down, and unable to rise, and my attendance was requested.

I find these symptoms:—Pulse soft and 72; breathing difficult to count accurately, and attended with a gurgling sound at each inspiration; she lies on the ground, quite unable to get up; her head turned round towards her side, and the chin resting on the ground; sometimes throws her head from one side to the other; the eyelids are half closed, and the eyes dull, but still sensible to the stimulus of light; she dozes; at long intervals moves her legs and body as if

in pain ; external orifice of vagina flabby and open ; rumination and lactation suspended ; rumen distended ; no dung nor urine, &c.

To have *Ammonium Causticum* and *Arsenicum*, 1st dilution, 10-drop doses, every two hours alternately.

On the 23rd, the improvement is really surprising ; she is lying like a healthy cow resting, has drunk freely of gruel, eaten a little mash, dunged and urinated freely, and, best of all, has made bold efforts to regain her feet.

Continue same medicines every three hours ; by all means keep her short of food. Note : that a fatal relapse may happen at this state in consequence of giving too much provender.

On the 24th, I received a message, informing me that the cow had risen, and was, to all appearance (and in fact) quite well.

CASE V.

A six-years-old, cross-bred, very good-conditioned cow, belonging to Mr. Barlow, Blackley, near Manchester, was easily delivered of her fourth calf on the afternoon of September 11th, 1857. She was milked and fed with the other cows, and at eight o'clock on the morning of the 13th, she was all right. When the attendant returned from his breakfast, *only half-an-hour* afterwards, he found her on the ground, and unable to rise. From this time up to half-past one, when I visited her, she had *Aconitum* and *Belladonna* every half-hour in turns.

Present state :—Pulse soft, and 72 per minute ; breathing difficult, attended with rattling, and reaching 30 per minute ; she cannot see ; the eyes are nearly shut up ; the pupils are dilated, and tears flow down the face in abundance ; the under jaw hangs

down when the head is held up ; the chin rests on the ground, and every time the breath comes *from* the lungs, the cheeks and lips are blown out, in the same way a man does when puffing smoke from his mouth ; the paunch is much swollen ; the bearing and fundament are open and flabby ; there is neither dung nor urine ; the tail is lashed, and the body writhed occasionally ; the head is thrown violently about at times.

Treatment.—To have four doses, 10 drops each, of *Ammonium Causticum* 1, given every half-hour ; then give the same medicine in turn every hour, with *Arsenicum* 1.

14th.—All the above symptoms have vanished, except slight dullness of the eyes. The pulse, breathing, dung, and urine are natural.

Continue medicine.

15th.—She got up at one o'clock this morning, and when I saw her at three o'clock in the afternoon, she was all right.

7.—LYMPHATITIS, OR WEED.

IN HORSES.

Weed is one of the common names for a rather frequent disease in horses, consisting of inflammation of the lymphatic vessels and glands of the legs, especially a hind one. It is most frequently observed in cart-horses, and is caused indirectly by errors of feeding and directly by

injuries, exposure of the legs to damp and cold, &c. I have noticed that many horses are attacked on a Monday morning, after the previous day's rest.

Usually, the attack comes on suddenly with a shivering fit, followed by feverishness—quick pulse and breathing, hot, dry mouth, &c. The affected leg is raised from the ground, and the horse frequently looks round to it, as if to tell where his pain is. The leg on examination is found to be hot, swollen, and tender to the touch. On the inner side of the thigh and leg, we discover a hard, painful, cord-like enlargement along the course of the lymphatic vessels, with here and there several enlarged glands, or valves in these vessels. The swelling of the vessels and leg begins in the groin at the bend of the thigh, and gradually creeps downwards along the inner surface of the leg, as far as the hock-joint, or even to the fetlock. The tumefaction of the leg pits on pressure, and in severe cases an amber-coloured fluid oozes out from the skin, and stands in drops on the hair. One attack predisposes to subsequent ones, and the leg is left permanently enlarged.

TREATMENT.

I have treated many cases of both these diseases, and at the time I write have just seen several improve rapidly. Several remedies have

been employed, but of late I rely exclusively on *Kali Bichromicum*, 10 drops every three hours. I also cause *Kali Bichrom. Lotion** to be rubbed in night and morning. In some cases, I first give a few 10-drop doses of *Aconite*.

8.—CELLULITIS.

This disease I believe I was the first to describe in my "Veterinary Homœopathy Illustrated." It is often confounded with weed, from which it may be distinguished by the absence of the enlarged vessels, valves, and glands in the inside of the thigh; by the swelling first appearing in the fetlock and extending *upwards* to the hock, sometimes to the thigh; by its attacking equally any leg; and by the skin breaking at the most prominent part of the swelling, and giving vent to a large quantity of foul matter. A slough is cast out from the opening, and a deep, unhealthy ulcer remains. At the same time, the animal is feverish and his breathing is quickened; the fæces hard and coated with mucus. The leg is excessively painful to the touch, and frequently

* See list of local applications.

so hard that the swelling does not pit on pressure with the finger. One attack, like weed, predisposes to subsequent ones, and the leg is left permanently thickened.

TREATMENT.

I give a few doses of *Aconite*, 10 drops every three hours. Then *Kali Bichromicum* as directed for weed; also rubbing in the lotion of the same drug. The result is rapid recovery.

APPENDIX.



LIST OF THE TINCTURES.

Names.	Dilutions	Names.	Dilutions
Acidum Hydrocyanicum*	1	Hamamelis Virginica ...	1
Acidum Phosphoricum.	1	Helleborus Niger.....	1
Aconitum Napellus, (or Aconite).....	1	Hepar Sulphuris	6
Ammonium Causticum	1	Hydrastis Canadensis .	1
Antimonium Crudum....	6	Ignatia Amara	1
Argentum Nitricum.....	1	Iodium	1
Arnica Montana	1	Ipecacuanha.....	1
Arsenicum Album	2	Kali Bichromicum	1
Aurum Muraticum.....	1	Kali Chloricum	1
Baryta Carbonica	6	Kreosotum	1
Belladonna	1	Mercurius Corrosivus ...	6
Bryonia Alba	1	Mercurius (Vivus)	5
Calcareo Carbonica.....	6	Nux Vomica.....	1
Cantharis	1	Opium	1
Camphor (strong tinct.)	1	Petroleum.....	3
Carbo Vegetabilis	6	Phosphorus	1
Chamomelis	1	Podophylin	1
Cheledonium Majus	1	Pulsatilla	1
China	1	Rhus Toxicodendron ...	1
Cina	1	Sabina	1
Colchicum.....	1	Scilla	1
Colocynthis	1	Silicea	6
Crocus	1	Spigelia.....	1
Cuprum Aceticum	3	Stannum	6
Digitalis Purpurea	1	Sulphur.....	1
Drosera Rotundifolia ...	1	Tartarus Emeticus	3
Euphrasia.....	1	Terebintha.....	1
Graphites	6	Thuja Occidentalis	1
		Veratrum Album	1
		Zincum Metallicum.....	6

* Chemists should not sell this drug except in MIXTURE with water.

LIST OF TRITURATIONS.

Arsenicum Album	1	Mercurius Iodidus	2
Ferri Sulphas	1	Mercurius Vivus.....	1
Ferrum.....	1	Nux Vomica	1
Mercurius Binioidus.....	1	Tartarus Emeticus	1
Mercurius Dulcis	A		

EXTERNAL APPLICATIONS.

This class of remedies includes certain specified drugs which are applied to the external surface of the body, in local affections, or injuries, for three distinct purposes—*firstly*, to assist the operation of the given drug when it is administered internally at the same time; *secondly*, to obtain a disinfectant, or antiseptic action in cases of unhealthy ulceration, or sloughing; and *thirdly*, to destroy vermin.

The following is a list of these applications, and their principal uses:—

Arnica Lotion.

Mix 1 fluid ounce of *Tincture of Arnica* with 15 of water.

Used in all kinds of injuries caused by mechanical violence, such as falls, blows, &c.; in fractures, dislocations, bruises; to wounds after operations; to pricks of the feet, corns, &c. In the last cases, a piece of

tow soaked in the strong tincture should be applied ; and a bran poultice may be medicated with the same, or with some of the lotion.

Calendula Lotion.

Mix 1 ounce of *Tincture of Calendula* with 15 of water.

Used in cuts, lacerations, flesh-wounds, &c. When the wound is irritable and inflamed, and a poultice is required, add to it two or three wine-glassfuls of the lotion.

Rhus Lotion.

Mix 1 ounce of *Tincture of Rhus* with 15 of water.

To be well rubbed into the seat of sprains of ligaments, or tendons, and in some forms of local rheumatism.

Kali Bichromicum Lotion.

Dissolve 1 drachm of the salt in 16 fluid ounces of water.

To be rubbed over farcy-buds, the enlargements of weed and cellulitis ; also very efficient in capped hocks, after *Arnica Lotion*.

Ruta Lotion.

Mix 1 ounce of *Tincture of Ruta* with 15 of water.

Used in some cases of distension of joints, or bursal sacs, resulting from sprains. To be rubbed in.

*Arsenical Lotion.**

Boil 4 grains of *Arsenious Acid* in a pint of distilled water.

Used in some forms of cracked heels, grease, and mange.

*Mercurius Corrosivus Lotion.**

Dissolve 1 drachm of *Corrosive Sublimate* in 16 ounces of hot water.

Used as an injection in fistulas, quittor, &c.; in the reduction of splints, bone-spavins, ring-bones; in thickening of the sheaths of tendons; and in some parasitic diseases of the skin. When rubbed in, the skin gets tender and scurfy in a few days; it should then be discontinued for a day or two, and the part rubbed with oil, and washed well with soap and water; then resumed.

Borax Lotion.

Borax 1 drachm, *Glycerine* 1 ounce, water 12 ounces.

Useful in certain skin diseases of dogs, attended with severe itching and scratching, and unconnected with parasites; also, in otitis.

Iodine Lotion.

Tincture of Iodine 1 to 2 fluid drachms; water 16 ounces.

Used in vaginal discharges.

* To prevent accidents with these two applications, the bottles containing them should be labelled "**POISON**;" and, when not used, locked up.

Kali Chloricum Lotion.

Kali Chlor. 2 drachms; *Glycerine* 8 fluid ounces; water 8 ounces.

Used in foot disease of cows, grease, &c.

Belladonna Lotion.

Extract of Belladonna 2 grains; water 1 ounce.

Used as a local application in periodic ophthalmia.

Hydrastis Injection.

Tincture of Hydrastis 1 ounce; water 16 ounces.

Used in nasal discharges; vaginal discharges.

Sulphur Ointment.

Sulphur 1 ounce; lard 6 ounces.

Used in parasitic skin diseases, and pimply eruptions with itching.

Benzine (Undiluted).

Used in parasitic mange—page 341.

Sulphurous Acid, and Lotion.

Used pure in malignant putrid sores, and unhealthy ulcerations; and diluted with equal parts of water, or of *Glycerine*, in certain skin diseases.

Hydrastis Inhalation.

1 drachm of the powder; water 1 quart.

Used in nasal discharges.

Baptisia Inhalation.

Tincture of Baptisia 2 fluid drachms; water
1 quart.

Applied by means of a specially-constructed apparatus, or by pouring some of the liquid on a hot brick held under the nose. In abscess of the lungs—page 253.

Tobacco Fumigation.

The *Tobacco* to be burnt on a hot shovel, placed under the animal's nose.

To kill the parasites in the nose, and in bronchitis from worms.

Sulphur Fumigation.

Sprinkle some *Flowers of Sulphur* on hot cinders held on a shovel, placed under the nose of the animal.

To kill parasites in the nose, and used in bronchitis due to worms.

Thuja (Undiluted Tincture).

Used for warts applied externally, page 355—and in mallenders, page 356.

Powdered Slaked Lime.

Used in open joints—page 71.

GLOSSARY ;

OR EXPLANATION OF SOME TECHNICAL WORDS
OCCURRING IN THIS WORK.

Abscess—A collection of matter.

Absorbents—The absorbent vessels pervade all parts of the body, and take up and convey matter, not altogether useless, to the thoracic duct.

Anthrax—Carbuncle.

Antiseptic—That which counteracts putrefaction.

Arthritic—Pertaining to joints.

Articulation—A joint.

Ascites—A collection of fluid in the belly.

Astringent—Applied to plants, &c., that contract animal fibre.

Bronchial Tubes—The branches of the air-passages in the lungs.

Bronchocele—Enlargement of the thymus gland in the neck.

Cachexia—Bad habits of body, in which the fluids and solids are vitiated.

Caries—Ulceration of bone.

Calculus—A stone.

Calculi—Stones.

Catarrh—A cold.

Characterized—Marked by particular symptoms.

Chronic—Long-standing, as opposed to acute.

Coma—Deep drowsiness.

Comatose—The state of coma.

- Concussion**—The disturbance caused by shaking.
- Congenital**—Applied to diseases, or malformations existing at birth.
- Conjunctivitis**—Inflammation of the mucons membrane lining the front of the eyeball and the eyelids.
- Conjunctival Membrane**—The membrane lining the eyeball and eyelids.
- Constipation**—Bound bowels.
- Contagious**—"Catching."
- Contagion**—The transmission of disease by contact with the morbid matter.
- Convalescent**—Recovered.
- Convulsion**—Violent shaking of the body, such as occurs in fits.
- Cornea**—The clear portion of the eyeball in front.
- Coryza**—Cold in the head—nasal flux.
- Dentition**—The process of teething.
- Diagnosis**—The Act of "seeing through" diseases, and so distinguishing one from another.
- Diaphragm**—The midriff. The muscle which separates the cavity of the chest from that of the belly.
- Digestive System**—The organs concerned in digesting food.
- Dyspnœa**—Difficulty of breathing.
- Echymosed**—Stained with extravasation of blood under the skin, or mucous membrane.
- Efflorescence**—A condition of the skin in which there is general redness.
- Emaciation**—Wasting.
- Emphysema**—Applied to the state of the lungs when the air-cells are ruptured, or dilated.
- Engorgement**—The blood being present in too large quantity in the lungs.
- Epidermis**—The outermost layer of the skin.
- Epileptiform**—A convulsive attack like that of epilepsy.
- Epizootic**—Wide-spread diseases amongst the lower animals.
- Extravasation**—The passing of blood from the vessels into the surrounding tissues.
- Fermentation**—The change which takes place in animal and vegetable substances under heat and moisture.

- Fistula**—A long pipe-like track of ulceration, with thickened sides, leading to, or arising from an abscess.
- Flatulence**—Wind in the bowels.
- Fluctuation**—The movement of fluid in a cavity, when felt by pressure, or striking with the hand.
- Fœtid**—Having an offensive smell.
- Gangrene**—The first stage of mortification.
- Glands**—Bodies whose office it is to produce or void some special fluid from the blood. Thus the liver is a gland, and the bile which it produces assists in digesting the food, &c. The kidney is also a gland, and discharges water from the blood.
- Granulations**—Grain-like, fleshy bodies which arise in wounds.
- Haw**—A small body at the inner angle of the eye, which is rapidly drawn across the ball of the eye, to protect it from injury.
- Hæmorrhage**—Bleeding.
- Hereditary Predisposition**—A liability to disease transmitted from parent to offspring.
- Homœopathy**—The word signifies *like-suffering*, and is used to designate the new mode of treatment, by the law of healing that "likes are cured by likes."
- Hypochondrium**—The right and left regions of the liver under the ribs.
- Incubation**—Breeding. The period between the entrance of poison into the body, and the first appearance of its effects.
- Inflammation**—A state in which the part, if external, is hot, painful, and swollen.
- Interdigital Space**—The space between the clefts of the hoof.
- Intestinal Canal**—The tube from the stomach to the anus.
- Invagination**—A condition of a portion of the bowel in which one part is received into another, like the involution of the finger of a glove.
- Keratitis**—Inflammation of the cornea.
- Larynx**—The upper part of the windpipe.
- Lesion**—Any hurt, injury, or departure from the healthy condition.
- Lumbar Region**—The loins,

Lymphatic Vessels—Vessels for the conveyance of lymph.
(See "absorbents.")

Masticate—To chew.

Mucocele—A small swelling, containing mucus and tears, near the inner angle of the eye.

Muco-purulent—A mixture of pus and mucus.

Mucus—The fluid secreted by a mucous membrane, such as that lining the mouth, &c.

Necrosed—Ulcerated bone.

Ophthalmoscope—An instrument used for the illumination of the interior of the eye, whereby diseases can be discovered there.

Osseous—Bony.

Papular—Pimply.

Papule—A pimple.

Paralysis—Loss of motion, or of sensation.

Parasite—A minute animal, or vegetable organism, which feeds upon the body of its host.

Parenchyma—The proper substance of the lungs, liver, &c.

Parturition—The act of delivery.

Pathological—Relating to the investigation of the nature of disease.

Parotid Gland—A gland for secreting saliva.

Paroxysmal—Occurring in fits.

Pharynx—The back part of the mouth.

Phlegmonous—Relating to a tense, painful, circumscribed swelling.

Photophobia—Dread of light.

Plethoric—Full habit of body.

Predisposing Cause—That which renders the body open to disease.

Premonitory—Warning.

Prepuce—Foreskin.

Purulent—Consisting of matter.

Pus—Matter.

Pustular—Matter.

Pustule—A small elevation of the skin containing matter.

Rectum—The last portion of the large bowel.

- Respiration**—The function of breathing.
- Respiratory Murmur**—The sound caused by the ingress and egress of air, as regards the lungs.
- Ruminants**—Cud-chewing animals.
- Rumination**—Chewing the cud.
- Salivation**—Increased secretion of saliva.
- Sanious**—Thin, serous, offensive discharge.
- Schneiderian Membrane**—The mucous membrane lining the nose.
- Serous Membrane**—A membrane that secretes serum.
- Spasm**—A muscular contraction.
- Suppuration**—The process whereby matter is formed.
- Symptom**—A sign, or mark of disease.
- Thoracic Cavity**—The cavity of the chest.
- Trituration**—Reduced to powder.
- Traumatic**—Belonging to, or caused by, wounds.
- Trocar**—An instrument used for removing the water in dropsy of the chest, belly, &c., and gas from the paunch.
- Ulceration**—The process by which an ulcer is formed.
- Ulcer**—A breach on any part of the surface of the body, &c., from which matter is given off.
- Ureter**—The tube from the kidney to the bladder.
- Urethra**—The tube from the bladder outwards.
- Urinary Passages**—The passages for the conveyance of urine.
- Uterus**—The womb.
- Vagina**—The passage leading to the womb.
- Vertebra**—One of the back bones.
- Vertigo**—Giddiness.
- Visceral**—Relating to the viscera.
- Vesicle**—A small elevation of the skin containing clear fluid.

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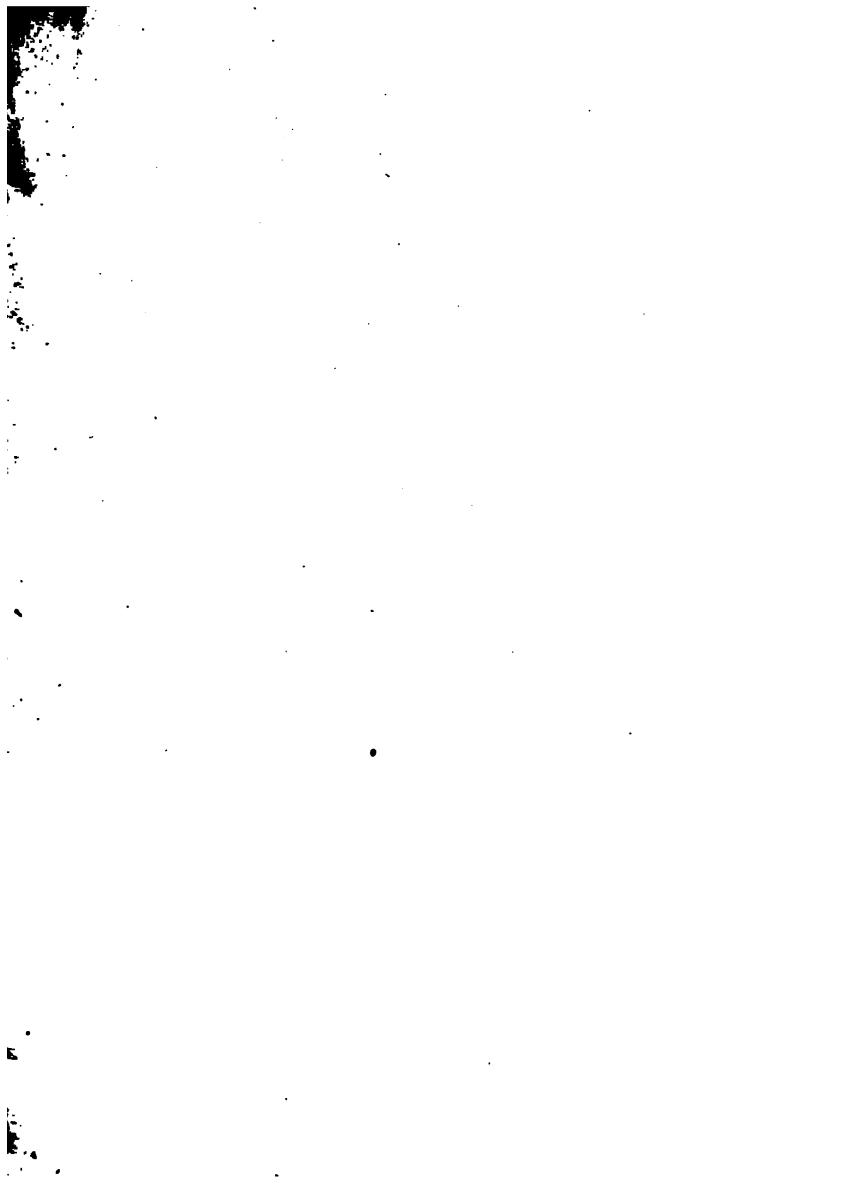
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